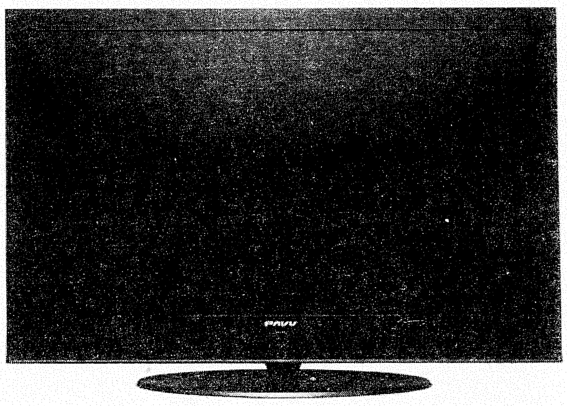
SAMSUNG

PDP-TELEVISION

Chassis : F31A(P_Europe_HD)_Calla
Model : PS42Q92HX/XEC

SERVICE Manual

PDP-TELEVISION



PS-42Q92H

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Refer to the service manual in the GSPN (see the rear cover) for the more information.

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1. Precaution

To avoid possible damage, electric shocks or exposure to radiation, follow the instructions below with regard to safety, installation, service and ESD.

1-1 Safety Precautions

1. Make sure all protective devices are properly installed including non-metallic handles and compartment covers when installing or re-installing the chassis or chassis assemblies.

2. Make sure that no gaps exist between the cabinets for children to insert their fingers in to prevent children from receiving electric shocks. Gaps mentioned above include ventilation holes between the PDP module and the cabinet mask, and the improper installation of the rear cabinet.

   Errors may occur when the resistance is below 1.0 MΩ or over 5.2 MΩ.
   In these cases, make sure that the device is repaired before sending it back to the customer.

3. Check for Electricity Leakage (Figure 1-1)
   Warning: Do not use an insulated transformer for checking the leakage. Use only those current leakage testers or mirroring systems that comply with ANSIC 101.1 and the Underwriter Laboratory's specifications (UL1410, 59.7).

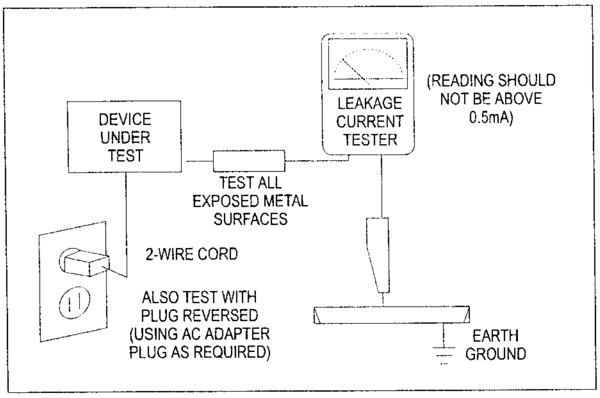

DEVICE UNDER TEST
LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

Fig. 1-1 AC Leakage Test

4. A high voltage is maintained within the specified limits using safety parts, calibration and tolerances. When voltage exceeds the specified limits, check each special part.

5. Warning for Engineering Changes:
   Never make any changes or additions to the circuit design or the internal part for this product.
   Ex: Do not add any audio or video accessory connectors. This might cause physical damage.
   Furthermore, any changes or additions to the original design/engineering will invalidate the warranty.

6. Warning - Hot Chassis:
   Some TV chassis are directly connected to one end of the AC power cord for electrical reasons.
   Without insulated transformers, the product can only be repaired safely when the chassis is connected to the earth end of the AC power source.

   To make sure the AC power cord is properly connected, follow the instructions below. Use the voltmeter to measure the voltage between the chassis and the earth ground. If the measurement is over 1.0V, unplug the AC power cord and change the polarity before re-inserting it. Measure the voltage between the chassis and the ground again.

7. Some TV chassis are shipped with an additional secondary grounding system. The secondary system is adjacent to the AC power line. These two grounding systems are separated in the circuit using an unbreakable/unchangeable insulation material.

8. When any parts, material or wiring appear overheated or damaged, replace them with new immediately. When any damage or overheating is detected, correct this immediately and make a regular check of possible errors.

9. Check for the original shape of the lead, especially that of the antenna wiring, any sharp edges, the AC power and the high voltage power. Carefully check if the wiring is too tight, incorrectly placed or loose. Never change the space between the part and the printed circuit board. Check the AC power cord for possible damages. Keep the part or the lead away from any heat-emitting materials.

10. Safety Indication:
    Some electrical circuits or device related materials require special attention to their safety features, which cannot be viewed by the naked eye. If an original part is replaced with another irregular one, the safety or protective features will be lost even if the new one has a higher voltage or more watts.

    Critical safety parts should be bracketed with (⚡ ⚠). Use only regular parts for replacements (in particular, flame resistance and dielectric strength specifications). Irregular parts or materials may cause electric shock or fire.

1-2 Servicing Precautions

Warning 1: First carefully read the "Safety Instruction" in this service manual.
When there is a conflict between the service and the safety instructions, follow the safety instruction at all times.

Warning 2: Any electrolytic capacitor with the wrong polarity will explode.

1. The service instructions are printed on the cabinet, and should be followed by any service personnel.

2. Make sure to unplug the AC power cord from the power source before starting any repairs.
   (a) Remove or re-install parts or assemblies.
   (b) Disconnect the electric plug or connector, if any.
   (c) Connect the test part in parallel with the electrolytic capacitor.

3. Some parts are placed at a higher position than the printed board. Insulated tubes or tapes are used for this purpose. The internal wiring is clamped using buckles to avoid contact with heat emitting parts. These parts are installed back to their original position.

4. After the repair, make sure to check if the screws, parts or cables are properly installed. Make sure no damage is caused to the repaired part and its surroundings.

5. Check for insulation between the blade of the AC plug and that of any conductive materials (i.e. the metal panel, input terminal, earphone jack, etc).

6. Insulation Check Process: Unplug the power cord from the AC source and turn the switch on. Connect the insulating resistance meter (500v) to the AC plug blade.

   The insulating resistance between the blade of the AC plug and that of the conductive material should be more than 1 MΩ.

7. Any B+ interlock should not be damaged.
   If the metal heat sink is not properly installed, no connection to the AC power should be made.

8. Make sure the grounding lead of the tester is connected to the chassis ground before connecting to the positive lead. The ground lead of the tester should be removed last.

9. Beware of risks of any current leakage coming into contact with the high-capacity capacitor.

10. The sharp edges of the metal material may cause physical damage, so protect yourself by wearing gloves during the repair.

11. Due to the nature of plasma display panels, partial after-images may appear if a still picture is displayed on the screen for a long period of time.
    This is caused by brightness deterioration due to the storage effect of the panel, and to prevent this from happening, we recommend that the brightness and contrast are reduced.
    (e.g.) Contrast: 25, Brightness: 50

1-3 Static Electricity Precautions

1. Some semi-conductive ("solid state") devices are vulnerable to static electricity. These devices are known as ESD. ESD includes the integrated circuit and the field effect transistor. To avoid any materials damage from electrostatic shock, follow the instructions described below.

2. Remove any static electricity from your body by connecting the earth ground before handling any semi-conductive parts or assemblies. Alternatively, wear a dischargeable wrist-belt.
   (Make sure to remove any static electricity before connecting the power source - this is a safety instruction for avoiding electric shock)

3. Remove the ESD assembly and place it on a conductive surface such as aluminum foil to prevent accumulating static electricity.

4. Do not use any Freon-based chemicals.
   Such chemicals will generate static electricity that causes damage to the ESD.

5. Use only grounded-tip irons for soldering purposes.

6. Use only anti-static solder removal devices.
   Most solder removal devices do not support an anti-static feature. A solder removal device without an anti-static feature can store enough static electricity to cause damage to the ESD.

7. Do not remove the ESD from the protective box until the replacement is ready. Most ESD replacements are covered with lead, which will cause a short to the entire unit due to the conductive foam, aluminum foil or other conductive materials.

8. Remove the protective material from the ESD replacement lead immediately after connecting it to the chassis or circuit assembly.

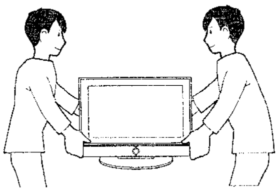
9. Take extreme caution in handling any uncovered ESD replacements. Actions such as brushing clothes or lifting your leg from the carpet floor can generate enough static electricity to damage the ESD.

CAUTION

These servicing instructions are for use by qualified service personnel only.
To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

1-4 Installation Precautions

1. For safety reasons, more than two people are required for carrying the product.



2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.

3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.

4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.

5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.

6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the high-voltage cable or the antenna falling over may cause fire or electric shock.

7. When connecting the RF antenna, check for a DTV receiving system and install a separate DTV reception antenna for areas with no DTV signal.

8. When installing the product, leave enough space (4") between the product and the wall for ventilation purposes.
   A rise in temperature within the product may cause fire.

9. When moving a PDP with removable speakers, detach the speakers first before moving the main body.
   Moving the PDP main body without separating the speakers may cause the speakers to detach, possibly causing damage or injury.

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2. Product Specification

2-1 Product Specification

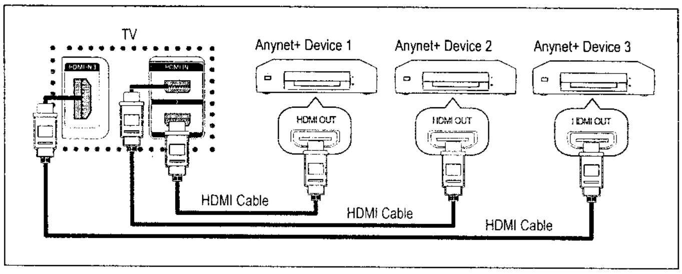
Features			
Block	Specification	Major IC	Remark
RF	Tuner	TCPW3001PD32S	SEMCO
PDP Module	Samsung SDI W2A	42"HD/50"HD	SAMSUNG SDI
Power	Input Voltage: AC 100~240V, 50/60Hz		
Video	Scaler	SVP-UX68	
	Video Decoder		
Sound	Sound AMP	NTP3000	Neo Fidelity
	Audio CODEC	SGTV5810	
Cabinet	Q9 Design		

Specification		
Model	PS-42Q92H	PS-50Q92H
Screen Size	42 Inches (16:9)	50 Inches (16:9)
Dimensions (WxHxD)	1055 x 757 x 316 mm (With stand)	1231 x 849 x 316 mm (With stand)
Weight	34 kg (With stand)	44 kg (With stand)
Voltage	AC 100~240V, 50/60Hz	
Colour System	PAL, SECAM, NTSC4.43, NTSC 3.58	
Sound System	BG, DK, I, M	
PC Resolution	1024 x 768 @ 60Hz	1360 x 768 @ 60Hz
ANTENNA input	AIR IN (75Ω unbalanced)	
VIDEO input	SCART1, SCART2 AV (Side), S-VIDEO (Side) COMPONENT IN (480i/P, 576i/P, 720P, 1080i) PC IN (MINI D-SUB 15P) HDMI1 HDMI2 (DVI IN) HDMI3 (Side)	
AUDIO input	SCART1, SCART2 AV (Side), S-VIDEO (Side) Component PC DVI	
Audio Output	AUDIO (L/R)	
Speaker Output	10W + 10W	15W + 15W
New Features	Anynet+	

■ New Features explanation

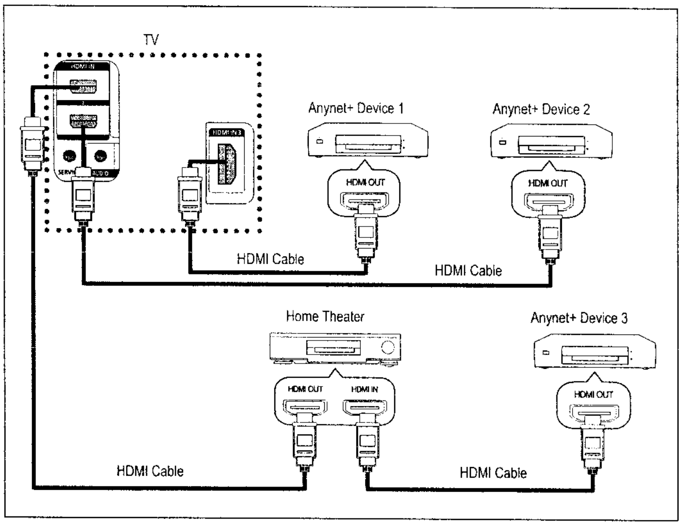
- Anynet+ : Anynet+ is an AV network system that enables you to control all connected Samsung AV devices with your Samsung TV's remote.

To directly connect to TV


TV
Anynet+ Device 1
Anynet+ Device 2
Anynet+ Device 3
HDMI OUT
HDMI OUT
HDMI OUT
HDMI Cable
HDMI Cable
HDMI Cable

Connect the [HDMI 1], [HDMI 2] or [HDMI 3] jack on the TV and the HDMI OUT jack of the corresponding Anynet+ device using the HDMI cable.

To connect to Home Theater


TV
Anynet+ Device 1
Anynet+ Device 2
HDMI OUT
HDMI OUT
HDMI Cable
HDMI Cable
Home Theater
Anynet+ Device 3
HDMI OUT
HDMI IN
HDMI OUT
HDMI Cable
HDMI Cable

1 Connect the [HDMI 1], [HDMI 2] or [HDMI 3] jack on the TV and the HDMI OUT jack of the corresponding Anynet+ device using the HDMI cable.

2 Connect the HDMI IN jack of the home theater and the HDMI OUT jack of the corresponding Anynet+ device using the HDMI cable.

→ Connect only one receiver.

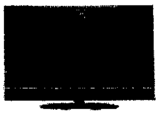
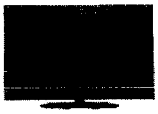
→ You can connect an Anynet+ device using the HDMI cable. Some HDMI cables may not support Anynet+ functions.

→ Anynet+ works when the AV device supporting Anynet+ is in the Standby or On status.

→ Anynet+ supports up to 8 AV devices in total.

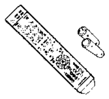
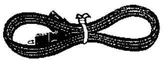
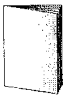
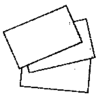
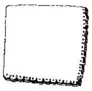
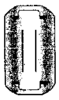
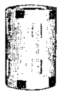
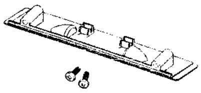
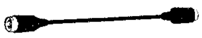
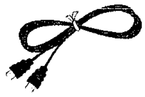
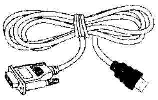
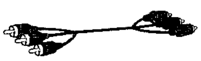
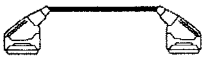
2-2 Specifications Analysis

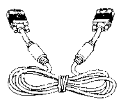
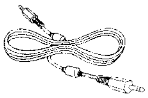
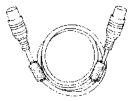
※ ○: application, X: non-application

Model		PS-42Q92H (Calla-42HD)	PS-50Q92H (Calla-50HD)	PS-42P7HD (Alps-42HD)
Design				
Basic	Display Type	PDP TV	PDP TV	PDP TV
	Built-In Tuner	O	O	O
	PC Resolution	**1024 x 768 @ 60Hz**	**1360 x 768 @ 60Hz**	1024 x 768 @75Hz
	PDP Module	**W2A**	**W2A**	V5.1
	Screen Size	**42 inches**	**50 inches**	42 inches
	Aspect Ratio	16 : 9	16 : 9	16 : 9
	Dimensions (WxHxD)	**1055 x 757 x 316 mm (With stand)**	**1231 x 849 x 316 mm (With stand)**	1055 x 775 x 341 mm (With stand)
	Weight	**34 kg (With stand)**	**44 kg (With stand)**	40.4 kg (With stand)
Picture	Brightness	**1,500 Cd/m2**	**1,300 Cd/m2**	1,100 Cd/m2
	Contrast Ratio	10000:1	10000:1	10000:1
	Image Enhacer	**FBE2X**	**FBE2X**	FBE
Audio	Equalizer	O	O	O
	Auto Volume	O	O	O
	Surround Sound	SRS TruSurround	SRS TruSurround	SRS TruSurround
	Speaker Output	**10 W + 10 W**	**15 W + 15 W**	15 W + 15 W
	Speaker	**2CH**	**2.2CH (2Way)**	Included
Features	PIP	O	O	O
	Double Screen	**O**	**O**	X
	Caption	X	X	X
	Still Image	O	O	O
	My Color Control	**O**	**O**	X
	Color Weakness	X	X	X
	Energy Saving	O	O	O
	Screen Burn Protection	O	O	O
Connections	Antenna	1 Input	1 Input	1 Input
	CVBS	**1AV(Side)**	**1AV(Side)**	1AV(Rear)
	S-Video	**O**	**O**	1 Input
	Component(Y/PB/PR)	1 Input	1 Input	1 Input
	PC(D-SUB)	1 Input	1 Input	1 Input
	DVI	O	O	O
	HDMI	**3 Input**	**3 Input**	2 Input
	Scart	2 Input	2 Input	2 Input
	Optical	O	O	O
	Coaxial	X	X	X

※ For the power supply and power consumption, refer to the label attached to the product.

2-3 Accessories

Accessories		Item	Item code	Remark
Supplied Accessories		Remote Control Batteries	BN59-00602A 4301-000103	Samsung Service center
		Power Cord	3903-000145	
		Owner's Instructions	BN68-01171Q	
		Warranty Card Registration Card Safety Guide Manual	BN68-00514C AA68-03575A AA68-03242E	
		Cloth-Clean	BN63-01798A	
		Ferrite Core for Earphone/Power Cord	3301-001110	
		Ferrite Core for S-VIDEO/Power Cord	3301-001305	
		Cover-Bottom Screws (2ea)	BN63-03055A 6003-001621	
Accessories that can be purchased additionally		S-VIDEO Cable 1200mm	BN39-00149A	Electronics Store/ Internal shopping mall
		HDMI Cable 3000mm	BN39-00641A	
		HDMI/DVI cable 3000mm	BN39-00643A	
		Component Cables (RCA) 1500mm	BN39-00279A	
		Scart Cable	None	

Accessories		Item	Item code	Remark
Accessories that can be purchased additionally		PC Cable 1830mm	BN39-00115A	Electronics Store/ Internal shopping mall
		PC Audio Cable 2000mm	BN39-00061B	
		Antenna Cable 3000mm	BN39-00333A	

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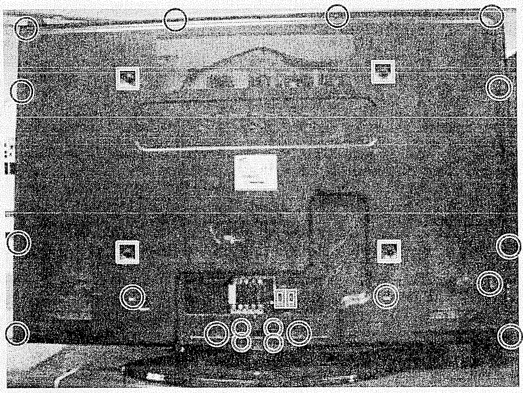
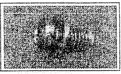
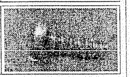
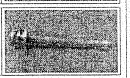
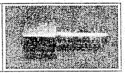
3. Disassembly & Reassembly

3-1 Overall Disassembly & Reassembly

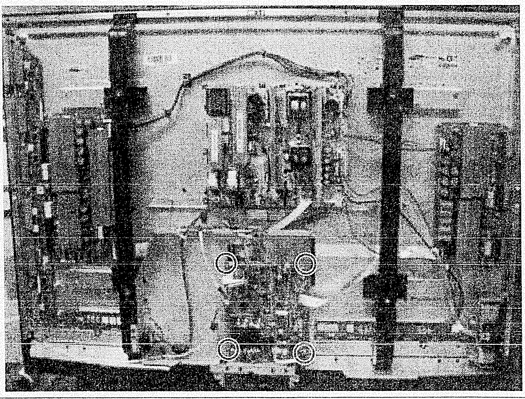
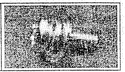
⚠ Notice

- Be sure to separate the power cord before disassembling the unit.
- Discharge the capacitors first when separating PCB's with high capacity capacitors such as SMPS, X Main Board, Y Main Board, etc. (A spark may be generated by the electric charge, and there is danger of electronic shock.)
- Check that the cables are properly connected referring to the circuit diagram when disassembling or assembling the unit taking care not to damage the cables.
- Take care not to scratch the Glass Filter in the front.
- Assemble the boards in the reverse order of the disassembly.
- The plasma must be layed down on a flat padded surface for disassembly and reassembly.

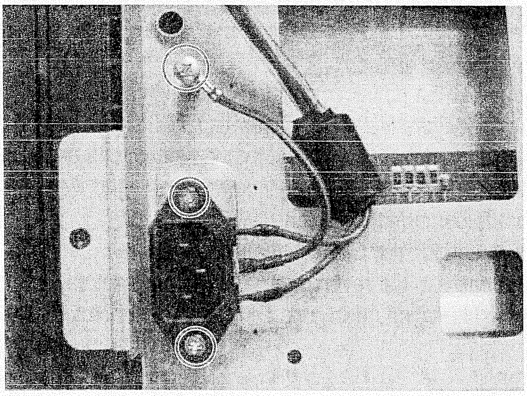
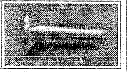
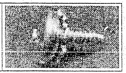
3-1-1 Separation of ASSY COVER P-REAR

Part Name	Description	Description Photo
Cover Rear	① Remove 4 screws. (☐) : M8,L16,ZPC(BLK),SWRCH18A,WP ② Remove 15 screws. (○) : BH,+,B,M4,L3,ZPC(BLK) ③ Remove 4 screws. (○) : PH,+,WSP,S,M4,L35,ZPC(BLK) ④ Remove the 2 Hex nuts for the PC input. (☐) : #4-40,L6,NI PLT,C3601,- ⑤ Remove the Cover Rear. ⚠: Please lay the PDP unit face down on a soft surface when removing the stand.	 ☐  ○  ○  ☐ 

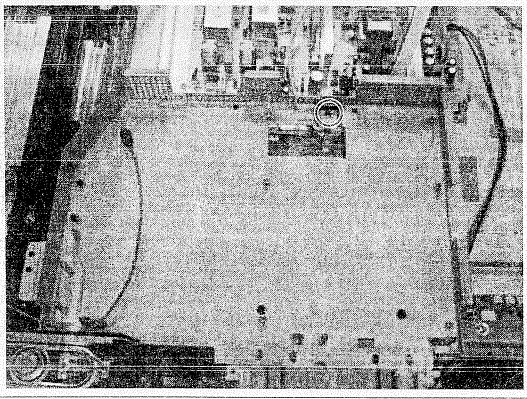
3-1-2 Separation of ASSY PCB MISC-MAIN

Part Name	Description	Description Photo
Main Board	① Detach all connectors from the Main Board. ② Remove 4 screws. : PH,+,WWP,M3,L8,NI PLT ③ Remove the Main Board.	 ○ 

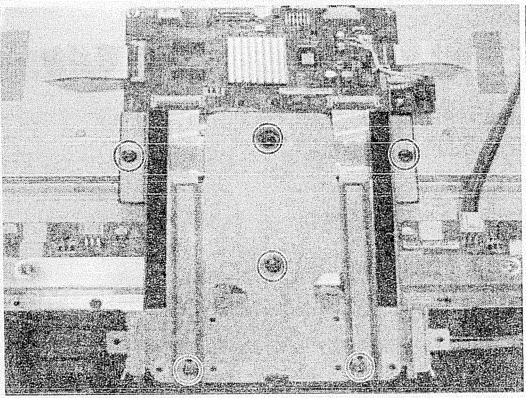
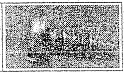
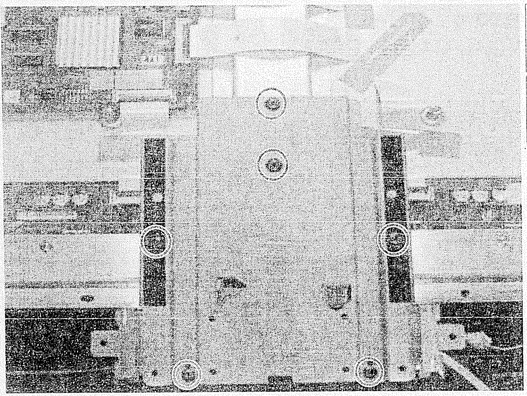
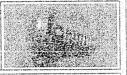
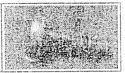
3-1-3 Separation of FILTER-EMI AC LINE

Part Name	Description	Description Photo
FILTER-EMI AC LINE	① Detach connector from Main SMPS. ② Remove 2 screws. (○) : PH,+,WWP,M3,L8,NI PLT ③ Remove a screw. (○) : BH,+,S,M4,L10,ZPC(BLK) ④ Remove FILTER-EMI AC LINE.	 ○  ○ 

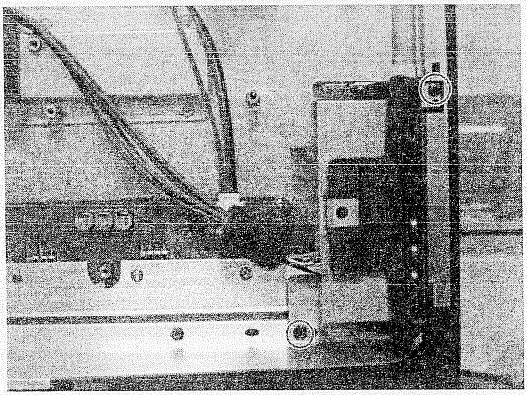
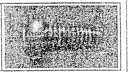
3-1-4 Separation of BRACKET-PCB

Part Name	Description	Description Photo
Bracket PCB	① Remove a screw. : BH,+,S,M4,L10,ZPC(BLK) ② Remove the BRACKET-PCB.	 ○

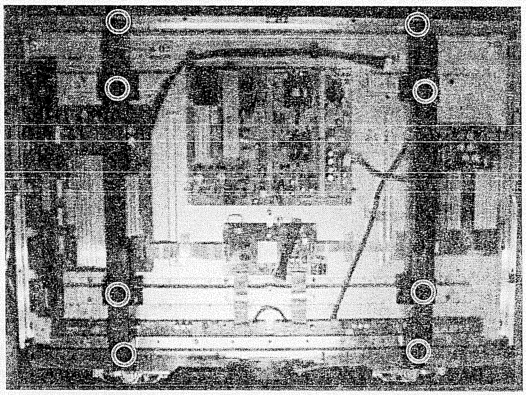
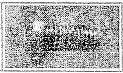
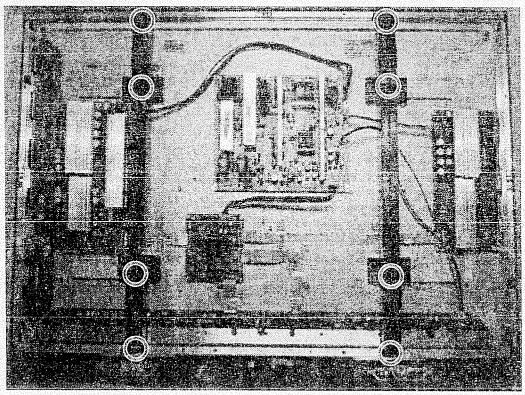
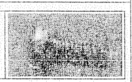
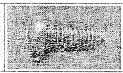
3-1-5 Separation of ASSY BRACKET

Part Name	Description	Description Photo
42" Bracket	① Remove 4 screws. (◯) : BH,+,S,M4,L10,ZPC(BLK) ② Remove 2 screws. (◯) : BH,+,B,M4,L3,ZPC(BLK) ③ Remove Bracket.	 ○ ○ 
50" Bracket	① Remove 4 screws. (◯) : BH,+,S,M4,L10,ZPC(BLK) ② Remove 2 screws. (◯) : BH,+,B,M4,L3,ZPC(BLK) ③ Remove Bracket.	 ○  ○ 

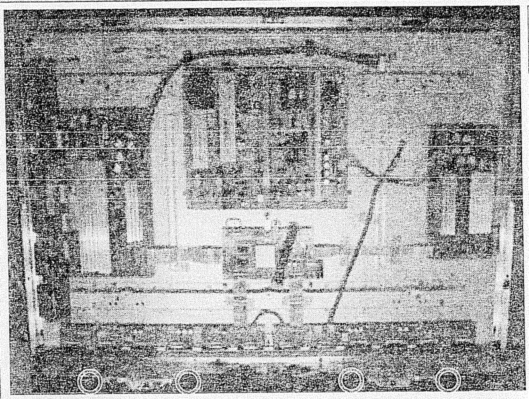
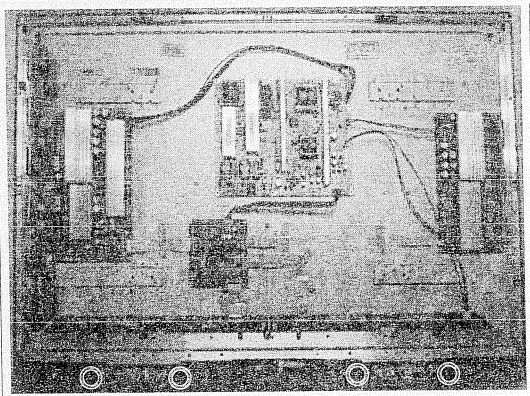
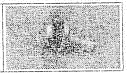
3-1-6 Separation of ASSY BOARD P-SIDE AV

Part Name	Description	Description Photo
Side AV	① Remove a screw. (◯) : BH,+,B,M4,L3,ZPC(BLK) ② Remove a screw. (◯) : BH,+,S,M4,L10,ZPC(BLK) ③ Remove the Side AV.	 ○ ○ 

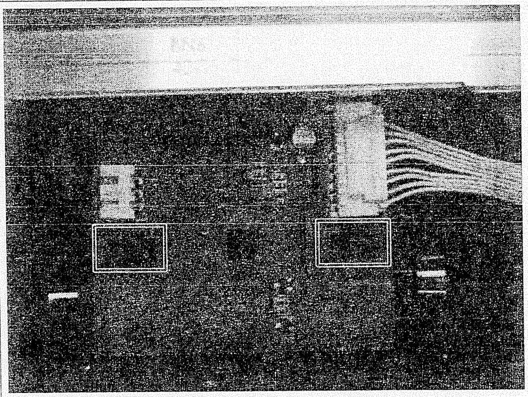
3-1-7 Separation of ASSY BRACKET P-WALL

Part Name	Description	Description Photo
42" Wall Bracket	① Remove 2 screws. (○) : BH,+,B,M4,L3,ZPC(BLK) ② Remove 6 screws. (○) : BH,+,S,M4,L10,ZPC(BLK) ③ Remove Wall Bracket. ⚠: Please lay the PDP panel face down on a soft surface when separating front cover.	 ○ ○ 
50" Wall Bracket	① Remove 2 screws. (○) : BH,+,B,M4,L3,ZPC(BLK) ② Remove 6 screws. (○) : BH,+,S,M4,L10,ZPC(BLK) ③ Remove Wall Bracket. ⚠: Please lay the PDP panel face down on a soft surface when separating front cover.	 ○  ○ 

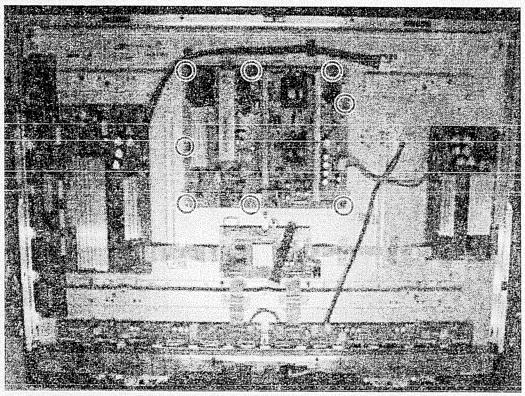
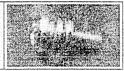
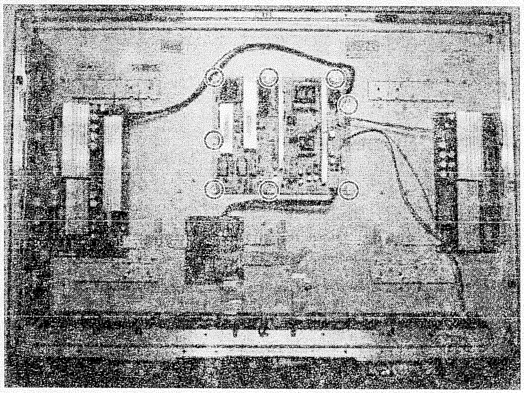
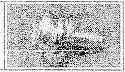
3-1-8 Separation of ASSY SPEAKER P

Part Name	Description	Description Photo
42" Speaker	① Remove 4 screws. : BH,+,WP,B,M4.0,L3,ZPC(BLK), SWRCH18A ② Remove the Speaker.	 ○
50" Speaker	① Remove 4 screws. : BH,+,WP,B,M4.0,L3,ZPC(BLK), SWRCH18A ② Remove the Speaker.	 ○ 

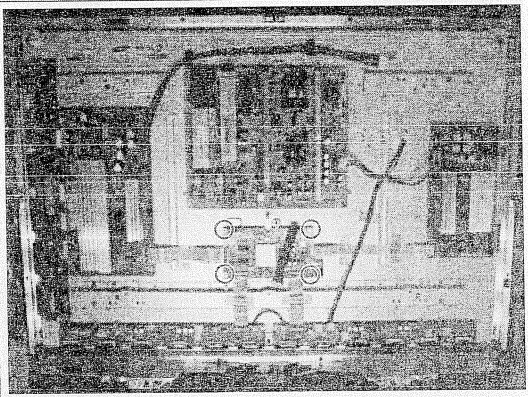
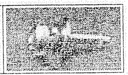
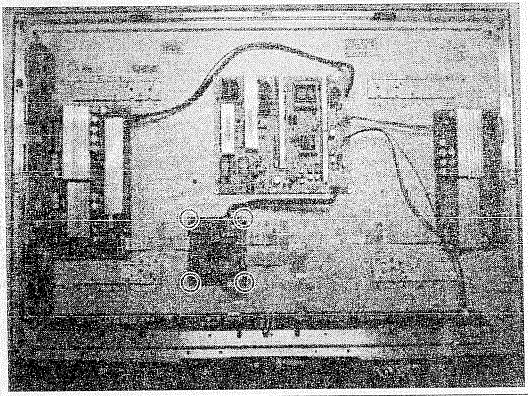
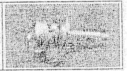
3-1-9 Separation of ASSY BOARD P-POWER&IR

Part Name	Description	Description Photo
Power & IR Board	① Detach all connectors from the Power&IR Board. ② Remove the Power&IR PCB unlocking the 2 holders.	

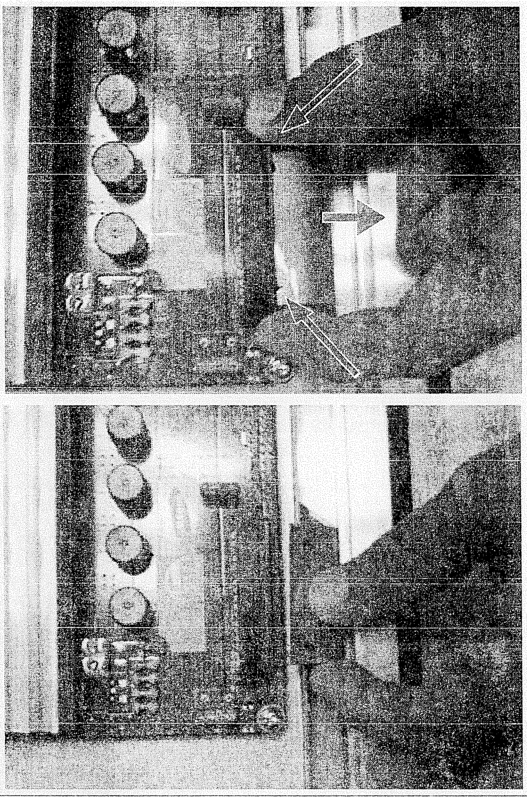
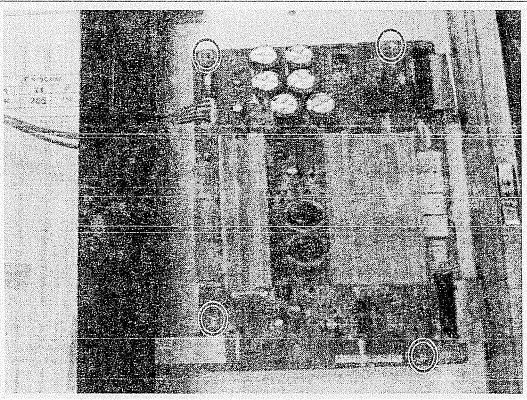
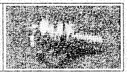
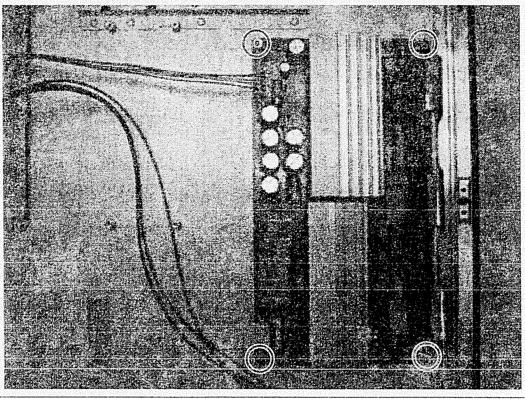
3-1-10 Separation of SMPS-PDP TV

Part Name	Description	Description Photo
42" SMPS	① Detach all connectors from the SMPS. ② Remove 8 screws. : PH,+,WWP,M3,L8,NI PLT ③ Remove the SMPS. ⚠: Wear gloves when handling the power board as there may be some remaining electrical charge in the capacitor. Specifically, avoid touching any part of the capacitor.	 ○ 
50" SMPS	① Detach all connectors from the SMPS. ② Remove 8 screws. : PH,+,WWP,M3,L8,NI PLT ③ Remove the SMPS. ⚠: Wear gloves when handling the power board as there may be some remaining electrical charge in the capacitor. Specifically, avoid touching any part of the capacitor.	 ○ 

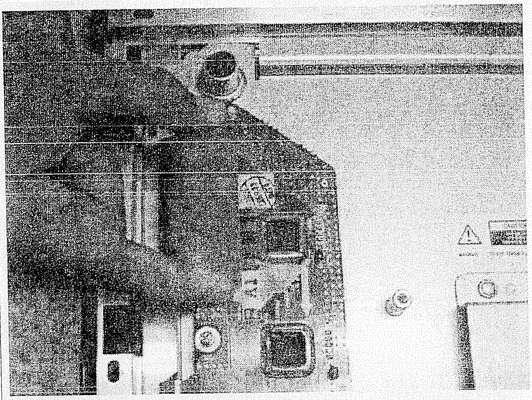
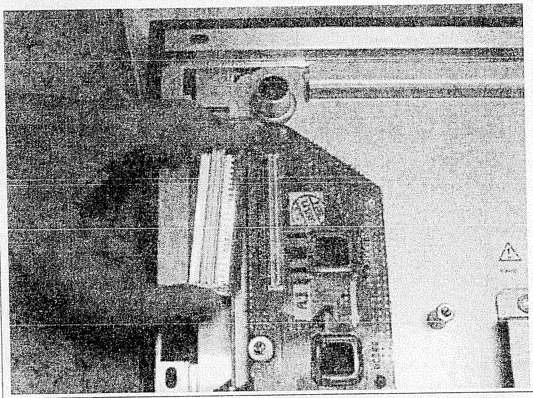
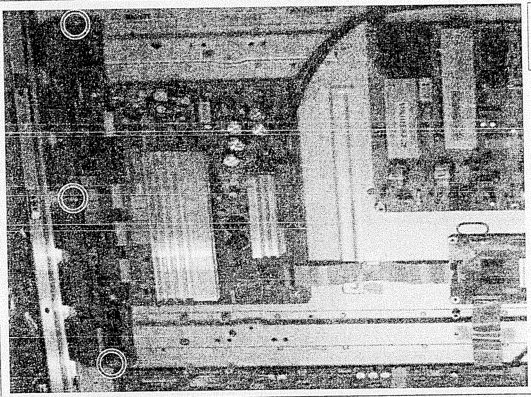
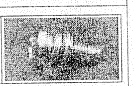
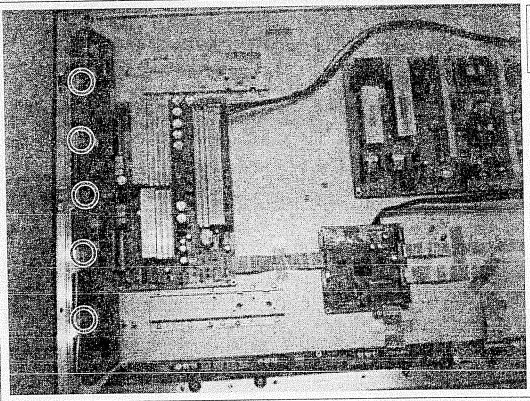
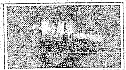
3-1-11 Separation of ASSY PDP MODULE P-LOGIC MAIN BOARD

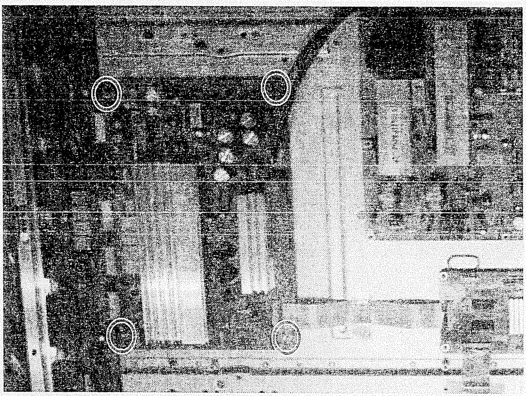
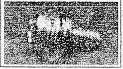
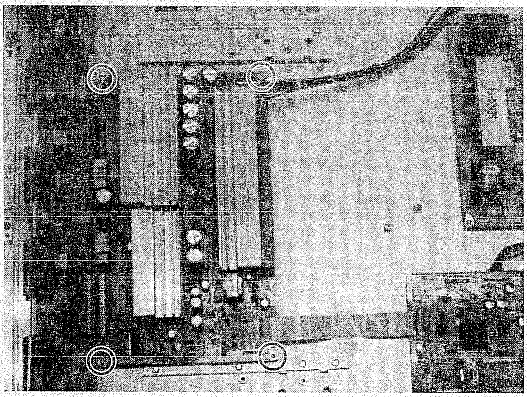
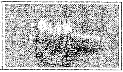
Part Name	Description	Description Photo
42" Logic Board	① Detach all connectors from the Logic Main Board. ② Remove 4 screws. : WSP,PH,+,M3,L8,NI PLT ③ Remove the Logic Main Board.	 ○ 
50" Logic Board	① Detach all connectors from the Logic Main Board. ② Remove 4 screws. : WSP,PH,+,M3,L8,NI PLT ③ Remove the Logic Main Board.	 ○ 

3-1-12 Separation of ASSY PDP MODULE P-X MAIN BOARD

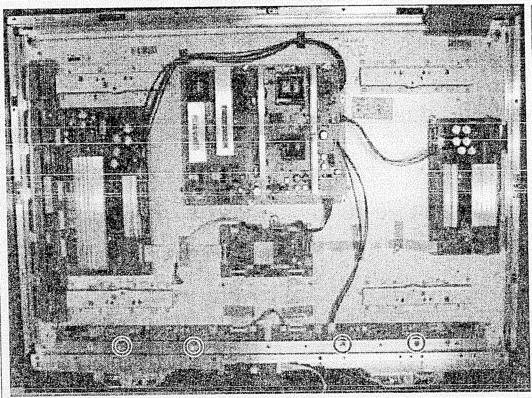
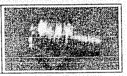
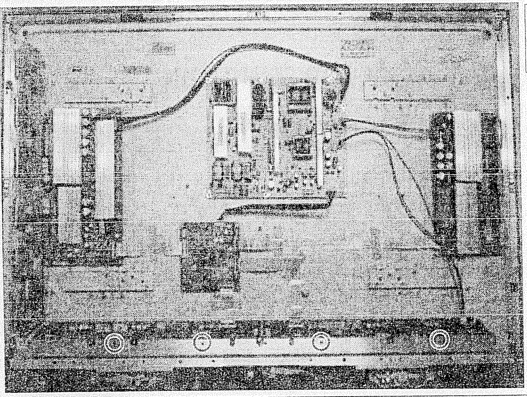
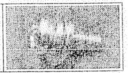
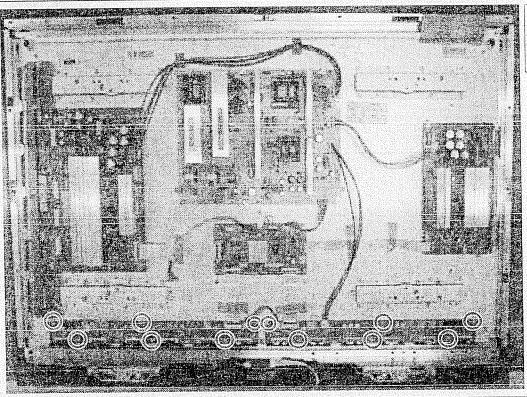
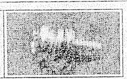
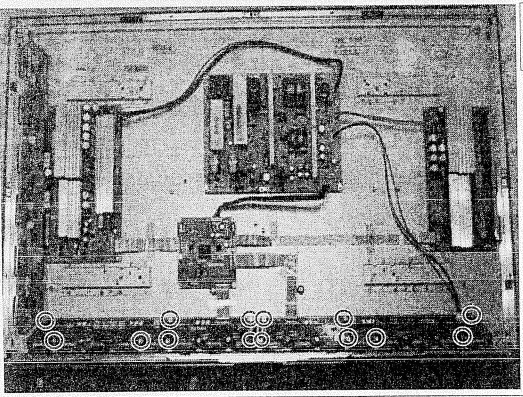
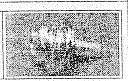
Part Name	Description	Description Photo
Flat Cable	① Detach all Connectors from the X-Main Board. ※ To separate the Flat Cable of the X-Board, press the upper and the lower sides of the connector.	
42" X-Main Board	① Remove 4 screws. : PH,+,WWP,M3,L8,NI PLT ② Remove the X-Main Board.	 ○ 
50" X-Main Board	① Remove 4 screws. : PH,+,WWP,M3,L8,NI PLT ② Remove the X-Main Board.	 ○

3-1-13 Separation of ASSY PDP MODULE P-Y MAIN BOARD

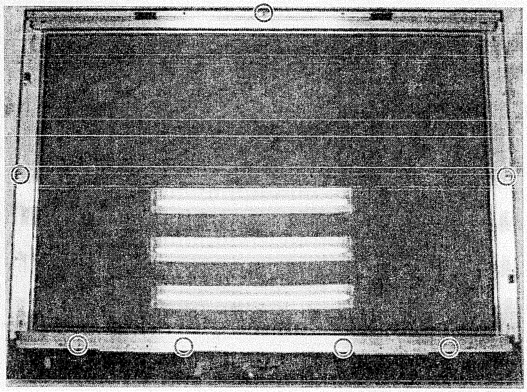
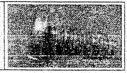
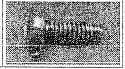
Part Name	Description	Description Photo
Flat Cable	① Detach the 6 scan board connectors from the panel by pulling the holder from both the top and bottom ends.	 
42" Y-Scan Board	① Remove 3 screws. : PH,+,WWP,M3,L8,NI PLT	 ○ 
50" Y-Scan Board	① Remove 5 screws. : PH,+,WWP,M3,L8,NI PLT	 ○ 

Part Name	Description	Description Photo
42" Y-Main Board	① Remove 4 screws. : PH,+,WWP,M3,L8,NI PLT ② Detach all connectors from the Y-Main Board.	 ○ 
50" Y-Main Board	① Remove 4 screws. : PH,+,WWP,M3,L8,NI PLT ② Detach all connectors from the Y-Main Board.	 ○ 

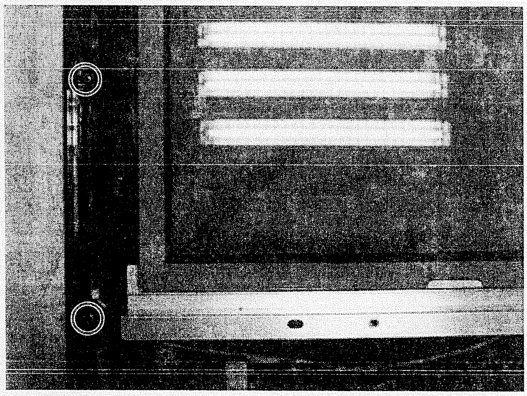
3-1-14 Separation of ASSY PDP MODULE P-ADDRESS BUFFER BOARD

Part Name	Description	Description Photo
42" Still Bar	① Remove 4 screws. : PH,+,WWP,M3,L8,NI PLT ② Remove the Still Bar.	 ○ 
50" Still Bar	① Remove 4 screws. : PH,+,WWP,M3,L8,NI PLT ② Remove the Still Bar.	 ○ 
42" Buffer Board	① Detach the all connectors from the buffer board. ② Remove 3 screws. : PH,+,WWP,M3,L8,NI PLT ③ Remove the E-Board and F-Board.	 ○ 
50" Buffer Board	① Detach the all connectors from the buffer board. ② Remove 14 screws. : PH,+,WWP,M3,L8,NI PLT ③ Remove the E-Board and F-Board.	 ○ 

3-1-15 Separation of ASSY PANEL BRACKETS

Part Name	Description	Description Photo
Panel Brackets	① Remove 3 screws. (○) : BH,+,B,M4,L3,ZPC(BLK) ② Remove 4 screws. (○) : BH,+,S,M4,L10,ZPC(BLK) ③ Remove the Side Panel Brackets.	 ○  ○ 

3-1-16 Separation of ASSY PCB FUNCTION

Part Name	Description	Description Photo
Function Board	① Remove 2 screws. : BH,+,B,M4,L3,ZPC(BLK) ② Remove the Function Board.	 ○

4. Troubleshooting

4-1 Troubleshooting

4-1-1 First Checklist for Troubleshooting

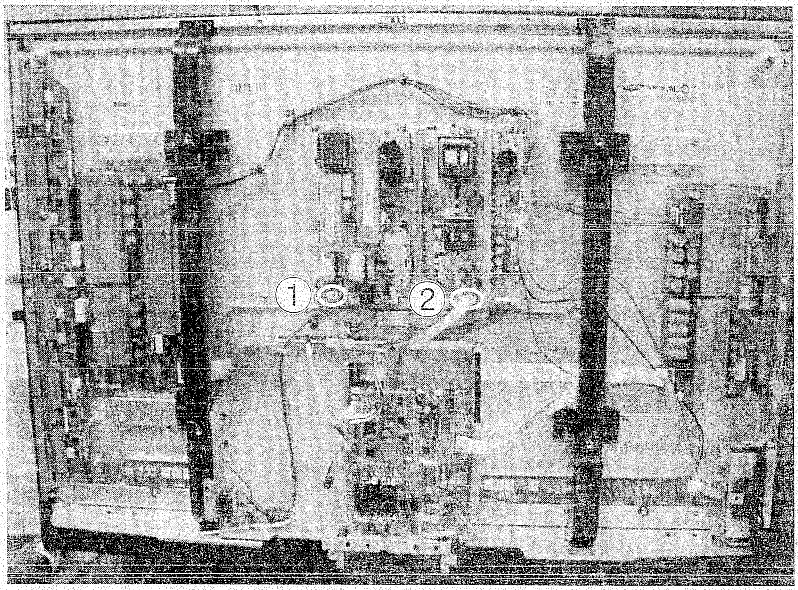
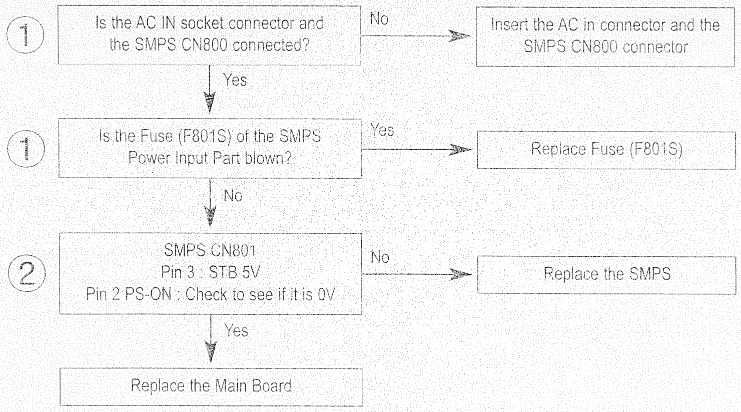
1. Check the various cable connections first.
   - Check to see if there is a burnt or damaged cable.
   - Check to see if there is a disconnected or loose cable connection.
   - Check to see if the cables are connected according to the connection diagram.

2. Check the power input to the Main Board.

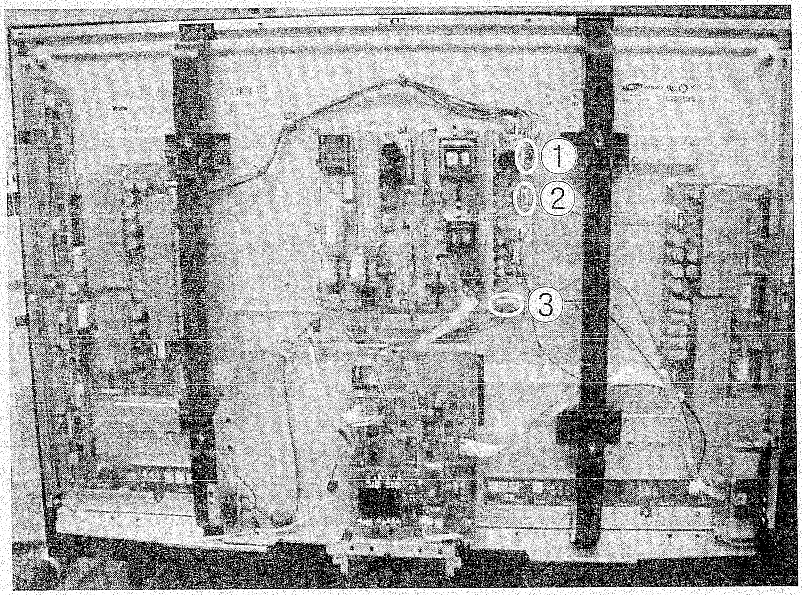
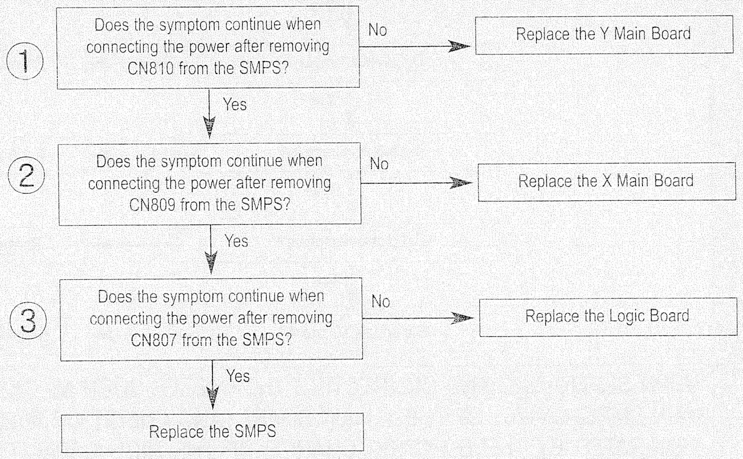
3. Check the voltage in and out between the SMPS ↔ Main Board, between the SMPS ↔ X, Y Main Board, and between the Logic Boards.

4-1-2 Checkpoints by Error Mode

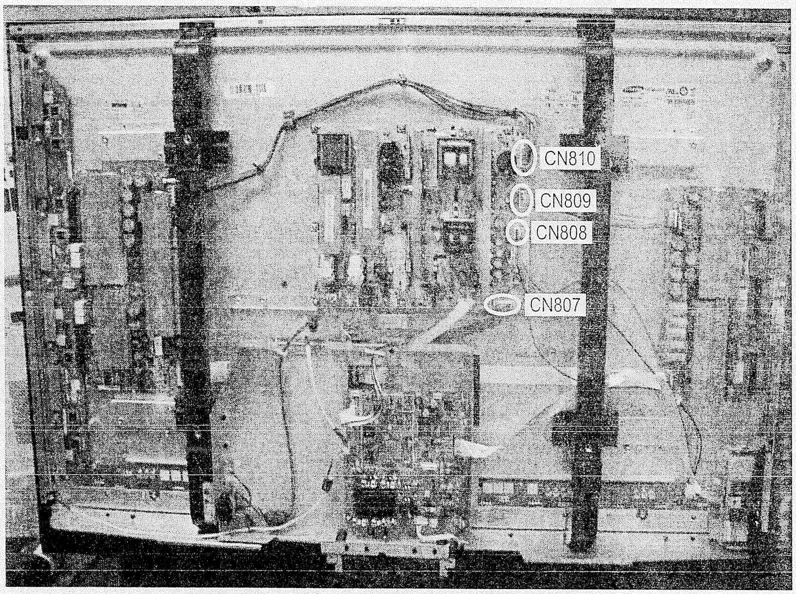
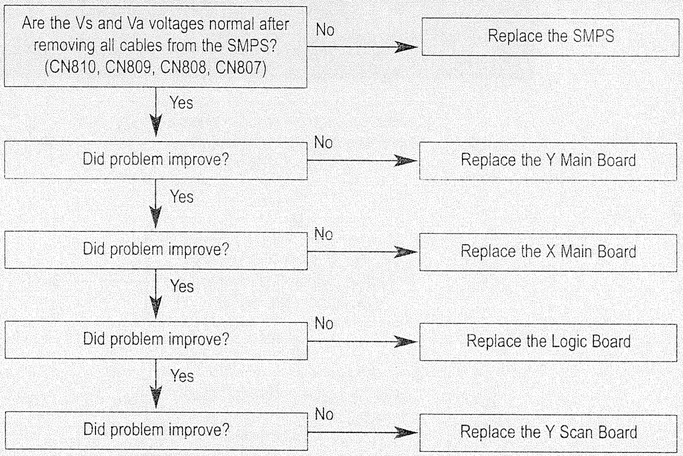
No Power

Symptom	- The LEDs on the front panel do not work when connecting the power cord. - The SMPS relay does not work when connecting the power cord. - The unit appears to be dead.
Major Checklist	The SMPS relay or the LEDs on the front panel does not work when connecting the power cord if the cables are improperly connected or the Main Board or SMPS is not functioning. In this case, check the following: - Check the internal cable connection. - Check the fuses. - Check the output voltages of the SMPS. - Replace the Main Board.
Troubleshooting Procedures	  ① Is the AC IN socket connector and the SMPS CN800 connected? No Insert the AC in connector and the SMPS CN800 connector Yes ① Is the Fuse (F801S) of the SMPS Power Input Part blown? Yes Replace Fuse (F801S) No ② SMPS CN801 Pin 3 : STB 5V Pin 2 PS-ON : Check to see if it is 0V No Replace the SMPS Yes Replace the Main Board

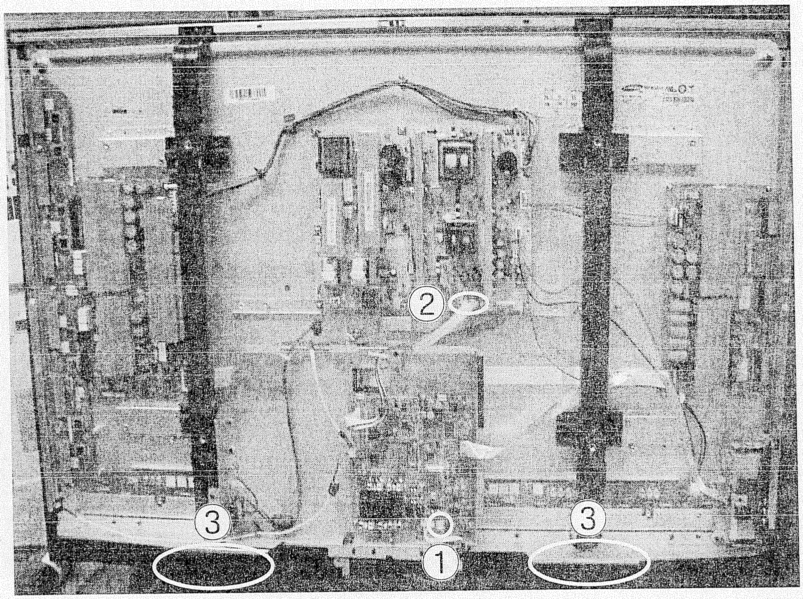
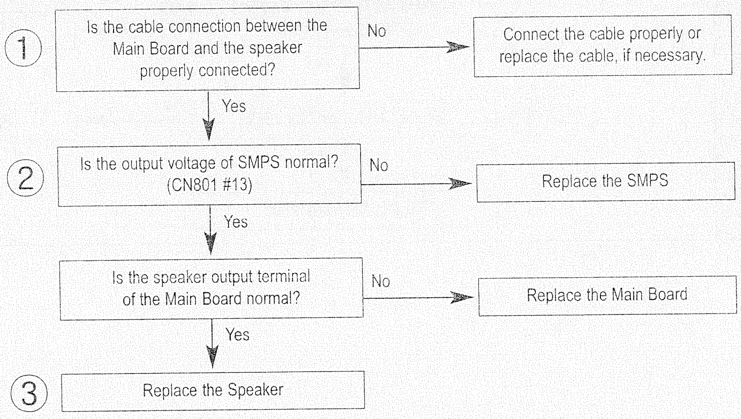
When the unit is repeatedly turning on and off

Symptom	- The SMPS relay is repeatedly turning on and off.
Major Checklist	In general, the SMPS relay repeatedly turns on and off by the protection function due to a defect on a board connected to the SMPS. - Disconnect all cables from the SMPS, operate the SMPS alone and check if the SMPS works properly and if each voltage output is correct. - If the symptom continues even when SMPS is operated alone, replace the SMPS. - If the symptom is not observed when operating the SMPS alone, find any defective assemblies by connecting the cables one by one.
Troubleshooting Procedures	  ① Does the symptom continue when connecting the power after removing CN810 from the SMPS? No Replace the Y Main Board Yes ② Does the symptom continue when connecting the power after removing CN809 from the SMPS? No Replace the X Main Board Yes ③ Does the symptom continue when connecting the power after removing CN807 from the SMPS? No Replace the Logic Board Yes Replace the SMPS
Caution	WHEN SEPARATING AND CONNECTING THE CABLES SUCH AS CN810, CN809, CN808, CN807 OF THE MAIN SMPS, CN4701 OF THE X MAIN BOARD, AND CN5707 OF THE Y MAIN BOARD, A SPARK MAY BE GENERATED BY THE ELECTRIC CHARGE OF THE HIGH CAPACITY CAPACITOR. THEREFORE, WAIT SOME TIME AFTER DISCONNECTING THE POWER CORD FROM THE UNIT.

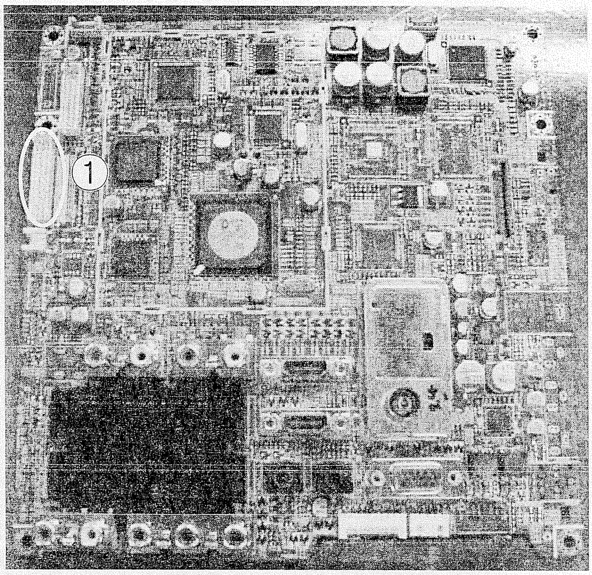
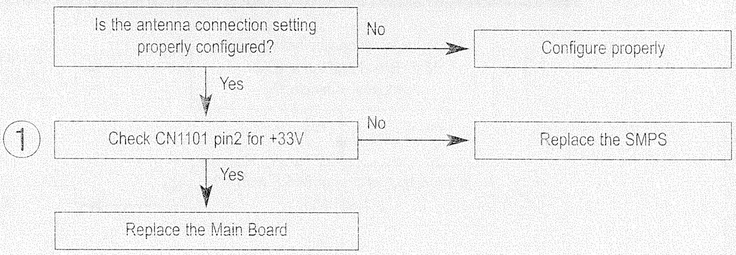
■ No Picture (When audio is normal)

Symptom	- Audio is normal but no picture is displayed on the screen.
Major Checklist	- This may happen when the Main Board is functioning but the X, Y Main Board, Logic Board, or Y Buffer Boards are not. - The output voltage of the Main SMPS. - This may happen when the LVDS cable connecting the Main Board and the Logic Board is disconnected.
Troubleshooting Procedures	 CN810 CN809 CN808 CN807  Are the Vs and Va voltages normal after removing all cables from the SMPS? (CN810, CN809, CN808, CN807) No Replace the SMPS Yes Did problem improve? No Replace the Y Main Board Yes Did problem improve? No Replace the X Main Board Yes Did problem improve? No Replace the Logic Board Yes Did problem improve? No Replace the Y Scan Board
Caution	WHEN SEPARATING AND CONNECTING THE CABLES SUCH AS CN810, CN809, CN808, CN807 OF THE MAIN SMPS, CN4701 OF THE X MAIN BOARD, AND CN5707 OF THE Y MAIN BOARD, A SPARK MAY BE GENERATED BY THE ELECTRIC CHARGE OF THE HIGH CAPACITY CAPACITOR. THEREFORE, WAIT SOME TIME AFTER DISCONNECTING THE POWER CORD FROM THE UNIT.

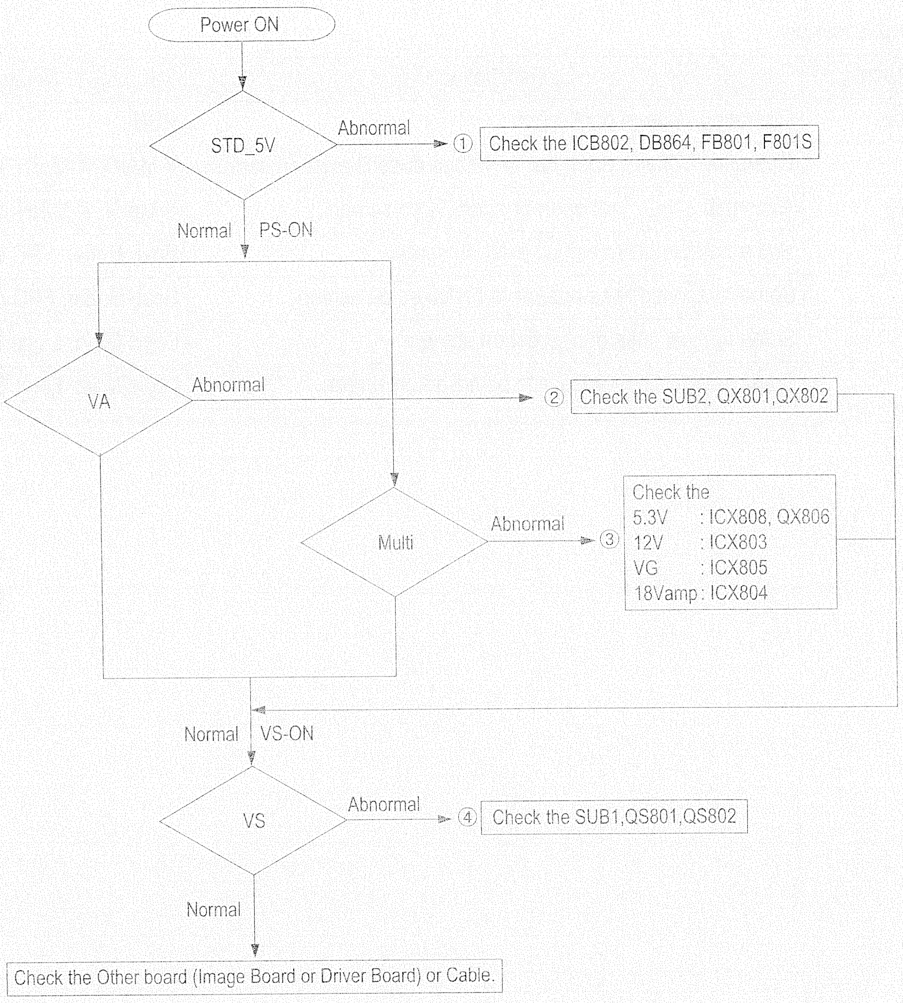
No Sound

Symptom	- Video is normal but there is no sound.
Major Checklist	- When the speaker connectors are disconnected or damaged. - When the sound processing part of the Main Board is not functioning. - Speaker defect.
Troubleshooting Procedures	  ① Is the cable connection between the Main Board and the speaker properly connected? No → Connect the cable properly or replace the cable, if necessary. Yes ② Is the output voltage of SMPS normal? (CN801 #13) No → Replace the SMPS Yes Is the speaker output terminal of the Main Board normal? No → Replace the Main Board Yes ③ Replace the Speaker

No Video

Symptom	- A normal/cable network analog broadcast screen is blank or abnormal but OSD is OK.
Major Checklist	- Check the antenna connection settings (Air: NTSC / ATSC, Cable: NTSC) - Check the CVBS cable connection. - Check the power input of the Main board.
Troubleshooting Procedures	  Is the antenna connection setting properly configured? No Configure properly Yes ① Check CN1101 pin2 for +33V No Replace the SMPS Yes Replace the Main Board

SMPS Troubleshooting


Power ON
STD_5V
Abnormal
① Check the ICB802, DB864, FB801, F801S
Normal
PS-ON
VA
Abnormal
② Check the SUB2, QX801,QX802
Multi
Abnormal
③ Check the
5.3V : ICX808, QX806
12V : ICX803
VG : ICX805
18Vamp : ICX804
Normal
VS-ON
VS
Abnormal
④ Check the SUB1,QS801,QS802
Normal
Check the Other board (Image Board or Driver Board) or Cable.

Drive Board Troubleshooting

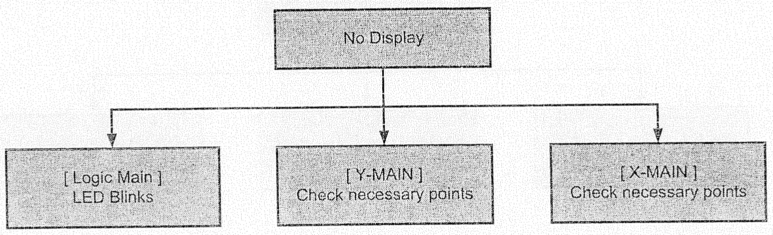
1) Troubleshooting Summary

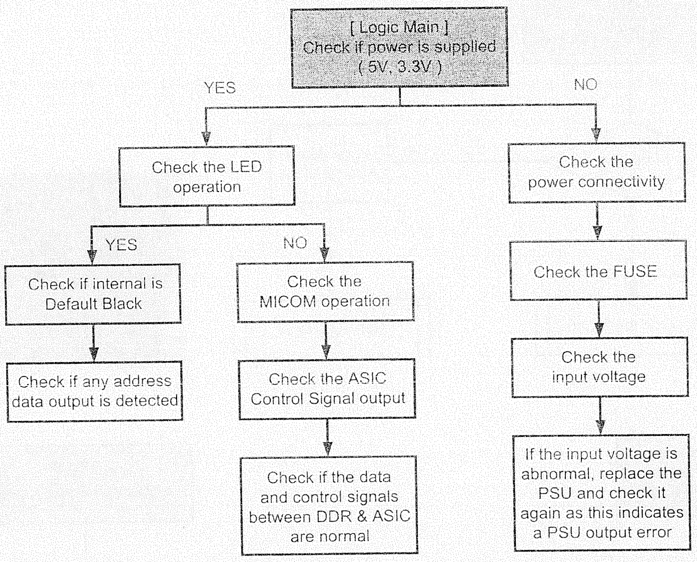
Condition Name	Description	Related Board
No Voltage Output	Operating Voltage don't exist	PSU
No Display	Operating Voltage exist, but an Image doesn't exist on screen	Y-MAIN, X-MAIN, Logic Main, Cable
Abnormal Display	Abnormal Image (not open or short) is no screen	Y-MAIN, X-MAIN, Logic Main
Sustain Open	Some horizontal lines don't exist on screen	Scan Buffer, FPC of X/Y
Sustain Short	Some horizontal lines appear to be linked on screen	Scan Buffer, FPC of X/Y
Address Open	Some vertical lines don't exist on screen	Logic Main, Logic Buffer, TCP
Address Short	Some vertical lines appear to be linked on screen	Logic Main, Logic Buffer, TCP

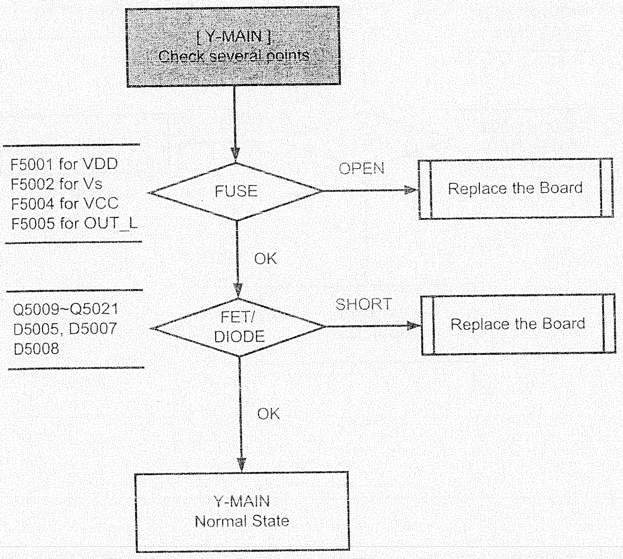
2) Troubleshooting Procedure in Abnormal Conditions

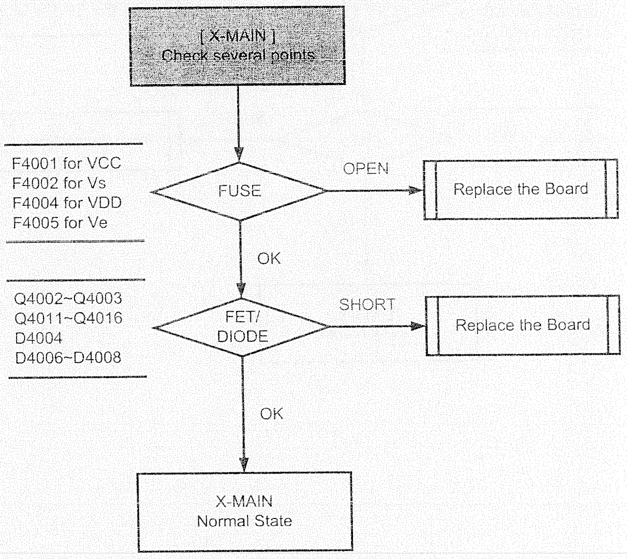
① No Display

▶ No Display is related with Y-MAIN, X-MAIN, Logic Main and so on.
This page shows you how to check the boards, and the following pages show you how to find the defective board.


No Display
[Logic Main]
LED Blinks
[Y-MAIN]
Check necessary points
[X-MAIN]
Check necessary points

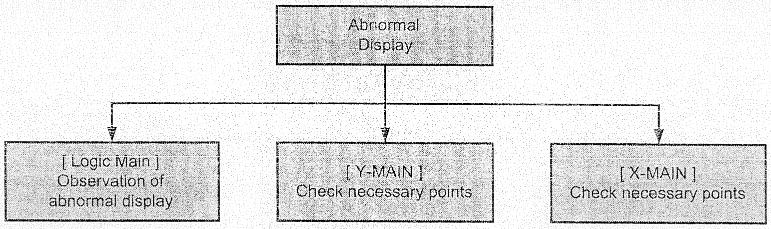

[Logic Main]
Check if power is supplied
(5V, 3.3V)
YES
NO
Check the LED operation
YES
NO
Check if internal is Default Black
Check if any address data output is detected
Check the MICOM operation
Check the ASIC Control Signal output
Check if the data and control signals between DDR & ASIC are normal
Check the power connectivity
Check the FUSE
Check the input voltage
If the input voltage is abnormal, replace the PSU and check it again as this indicates a PSU output error

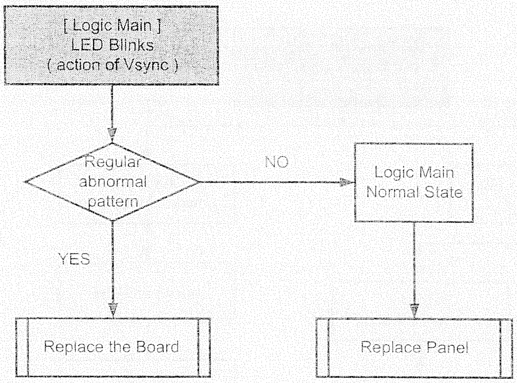

[Y-MAIN]
Check several points
F5001 for VDD
F5002 for Vs
F5004 for VCC
F5005 for OUT_L
FUSE
OPEN
Replace the Board
OK
Q5009~Q5021
D5005, D5007
D5008
FET/
DIODE
SHORT
Replace the Board
OK
Y-MAIN
Normal State

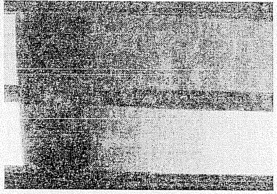

[X-MAIN]
Check several points
F4001 for VCC
F4002 for Vs
F4004 for VDD
F4005 for Ve
FUSE
OPEN
Replace the Board
OK
Q4002~Q4003
Q4011~Q4016
D4004
D4006~D4008
FET/
DIODE
SHORT
Replace the Board
OK
X-MAIN
Normal State

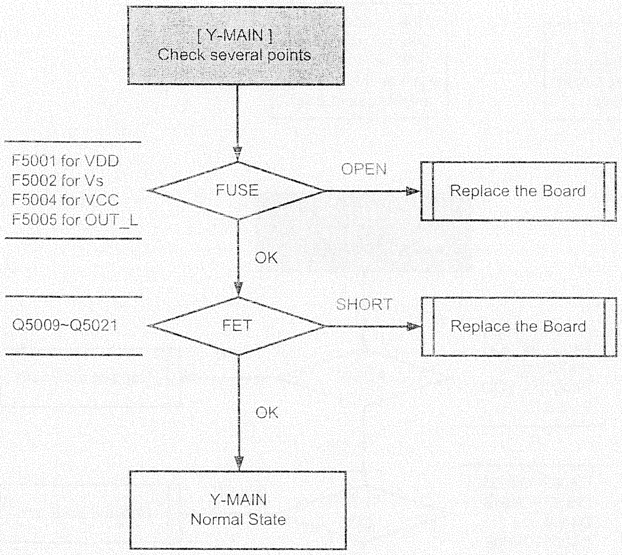
② Abnormal Display(Abnormal Image is on Screen.(except abnormality in Sustain or Address))

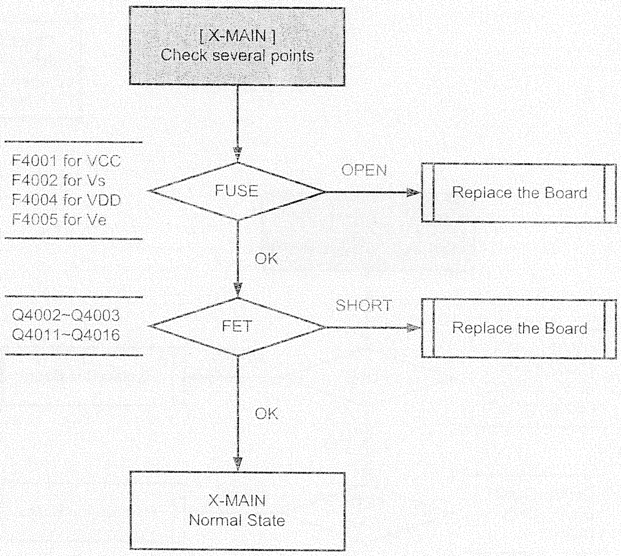
▶ Abnormal Display is related with Y-MAIN, X-MAIN, Logic Main and so on.
This page shows you how to check the boards, and the following pages show you how to find the defective board.


Abnormal Display
[Logic Main] Observation of abnormal display
[Y-MAIN] Check necessary points
[X-MAIN] Check necessary points

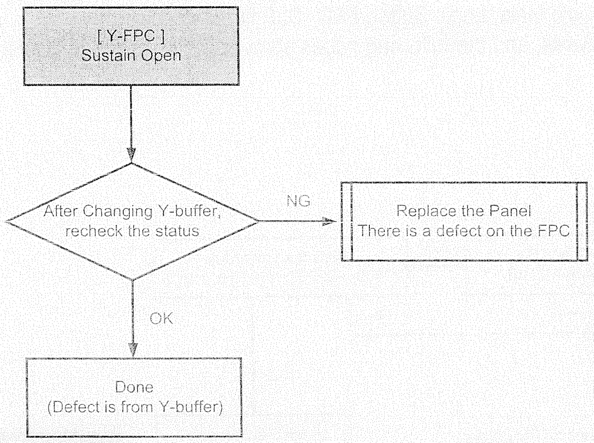

[Logic Main] LED Blinks (action of Vsync)
Regular abnormal pattern
NO
Logic Main Normal State
YES
Replace the Board
Replace Panel

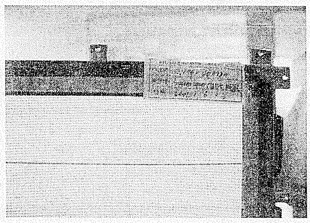



[Y-MAIN] Check several points
F5001 for VDD
F5002 for Vs
F5004 for VCC
F5005 for OUT_L
FUSE
OPEN
Replace the Board
OK
Q5009~Q5021
FET
SHORT
Replace the Board
OK
Y-MAIN Normal State

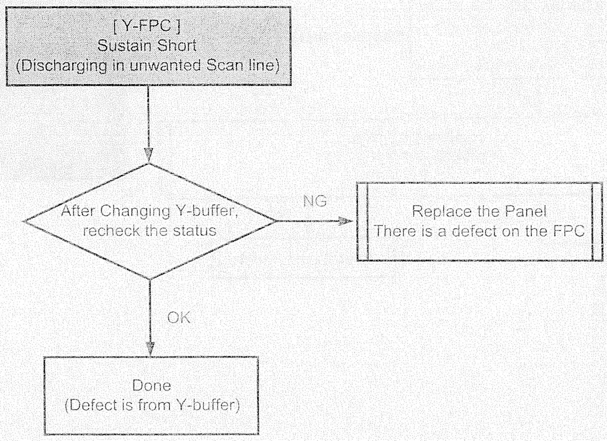

[X-MAIN] Check several points
F4001 for VCC
F4002 for Vs
F4004 for VDD
F4005 for Ve
FUSE
OPEN
Replace the Board
OK
Q4002~Q4003
Q4011~Q4016
FET
SHORT
Replace the Board
OK
X-MAIN Normal State

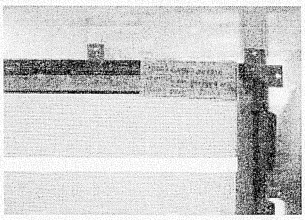
③ Sustain Open (some horizontal lines don't exist on screen)


[Y-FPC]
Sustain Open
After Changing Y-buffer, recheck the status
NG
Replace the Panel
There is a defect on the FPC
OK
Done
(Defect is from Y-buffer)



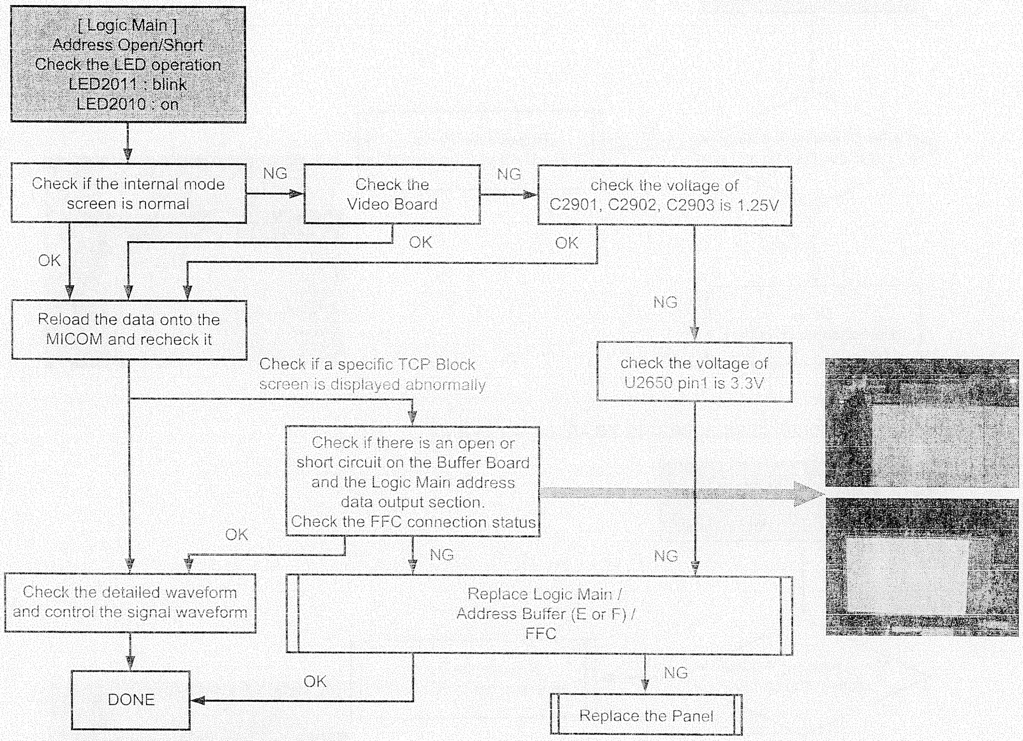
④ Sustain Short (some horizontal lines appear to be linked on Video)


[Y-FPC]
Sustain Short
(Discharging in unwanted Scan line)
After Changing Y-buffer, recheck the status
NG
Replace the Panel
There is a defect on the FPC
OK
Done
(Defect is from Y-buffer)

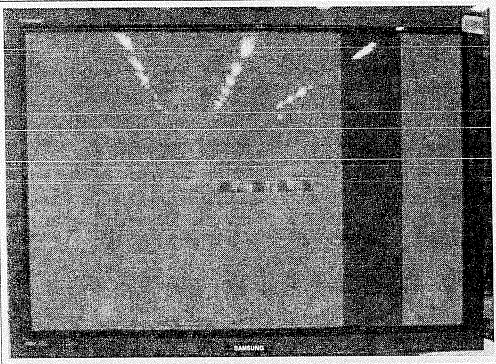
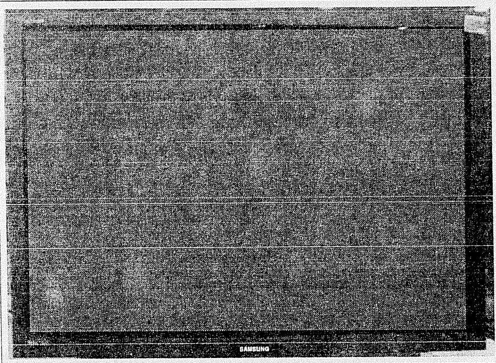
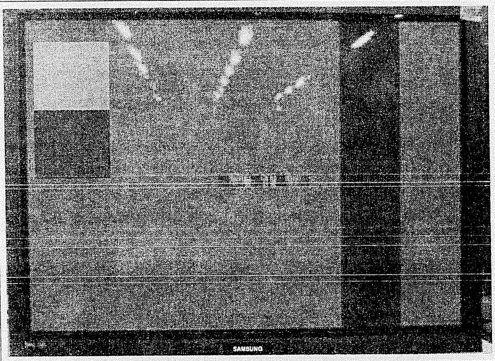
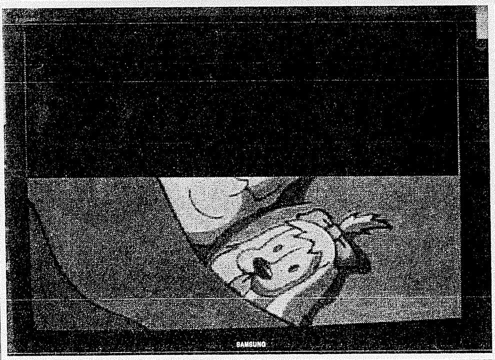


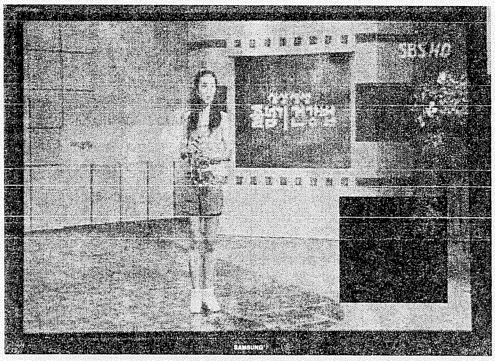
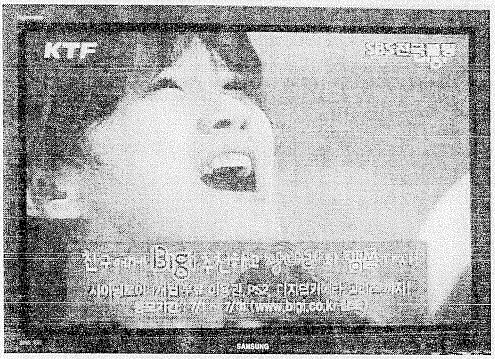
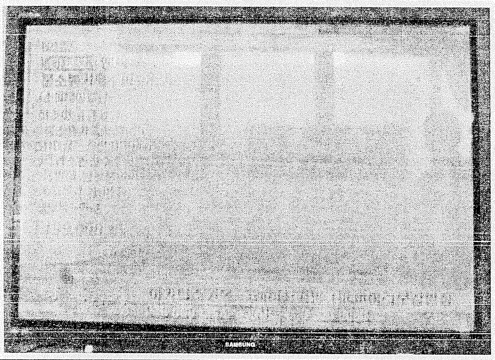
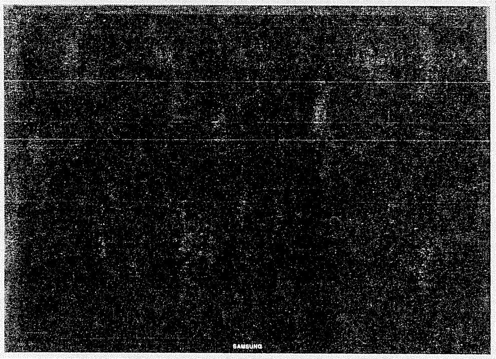
⑤ Address Open, Short

▶ Address Open and Short is related with Logic Main, Logic Buffer, FFC, TCP film and so on.
This page shows you how to check the boards, and the following pages show you how to find the defective board.


[Logic Main]
Address Open/Short
Check the LED operation
LED2011 : blink
LED2010 : on
Check if the internal mode screen is normal
NG
Check the Video Board
NG
check the voltage of C2901, C2902, C2903 is 1.25V
OK
OK
OK
NG
Reload the data onto the MICOM and recheck it
Check if a specific TCP Block screen is displayed abnormally
check the voltage of U2650 pin1 is 3.3V
Check if there is an open or short circuit on the Buffer Board and the Logic Main address data output section.
Check the FFC connection status
OK
NG
NG
Check the detailed waveform and control the signal waveform
Replace Logic Main / Address Buffer (E or F) / FFC
DONE
OK
NG
Replace the Panel

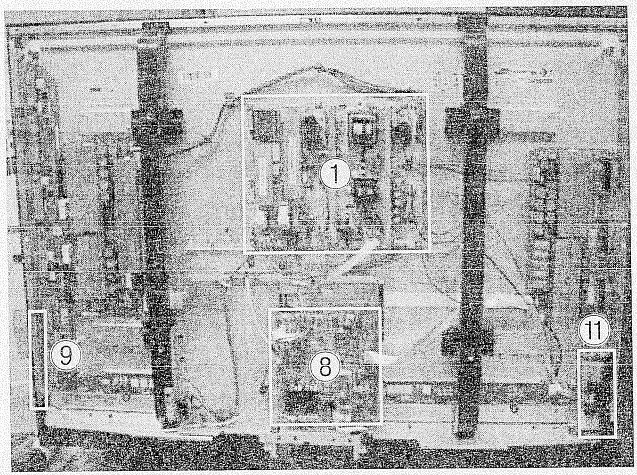
4-1-3 Faults and Corrective Actions

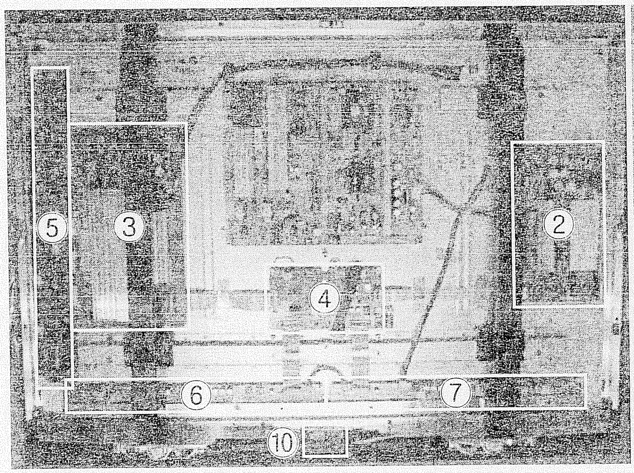
Symptom	Related Image	Causes and Countermeasures
A blank vertical cell (block) appears on the screen.		Address buffer defect - Replace the corresponding upper/lower buffers (E, F) COF defect (burnt) - Replace the module
A green screen appears when the TV is turned on.		The Scale is not reseting - Replace the Main board
The OSD box appears but there is no text.		Incorrect program version - Check the version of each program - Replace the Main board
A blank upper (or lower) block appears on the screen.		Upper/Lower Y Buffer defect - Replace the corresponding upper/lower buffers (E, F)

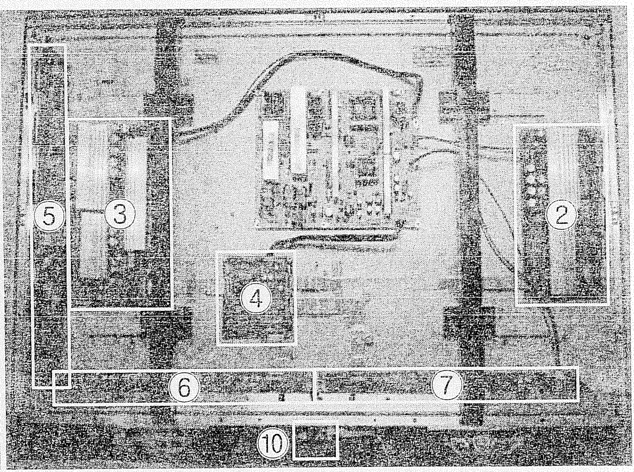
Symptom	Related Image	Causes and Countermeasures
Either the main or sub picture does not appear.		Replace the Main board
A vertical green line appears on the screen.		The SMPS voltage is incorrect - Adjust the SMPS voltage according to the voltage printed on the module label
Dim screen (blurred in red)		X-Main board defect - Replace the X-Main board
A blank screen appears		- Replace the Y-Main board

4-1-4 Troubleshooting Procedures by assembly

No	Assembly	Major Symptoms
1	SMPS-PDP TV	No power, Blank screen, the Relay repeats On and Off.
2	ASSY PDP MODULE P-X-MAIN	Blank screen
3	ASSY PDP MODULE P-Y-MAIN	Blank screen
4	ASSY PDP MODULE P-LOGIC MAIN	Blank screen, Screen noise
5	ASSY PDP MODULE P-Y-MAIN SCAN BUFFER	Row Bar screen is blank
6	ASSY PDP MODULE P-ADDRESS E BUFFER	Corresponding Buffer Board block screen is blank.
7	ASSY PDP MODULE P-ADDRESS F BUFFER	Corresponding Buffer Board block screen is blank.
8	ASSY PCB MISC-MAIN	No Power, Abnormal screen for each input source, PIP screen trouble, Sound trouble
9	ASSY BOARD P-FUNCTION	The side function key does not work properly
10	ASSY BOARD P-POWER&IR	The remote control does not work properly, the LED does not work properly.
11	ASSY BOARD P-SIDE AV	The AV2 and S-VIDEO2 modes do not work properly




<PDP 42">


<PDP 50">

4-2 Adjustment

4-2-1 Service Instruction

■ Before Performing After Sales Services

1. Check if the measurement and test equipment is working properly.
2. Secure sufficient work space for disassembling the product.
3. Prepare a soft pad for disassembling the product.

■ Service adjustment item after replacement of Board

<If adjustment equipment is available>

① PDP Option of Factory Mode → set the Factory Data Type item as the suitable value of relevant model.
② Adjust Calibration of Factory Mode for each mode.
③ Adjust White Balance of Factory Mode.

<If adjustment equipment is not available>

① Write down the value of HDMI White Balance of Factory Mode before replacing Board.
② PDP Option of Factory Mode → set the Factory Data Type item as the suitable value of relevant model.
③ Set the value of HDMI White Balance with the value written down before.

4-2-2 How to Access Service Mode

1. General Remote

To Enter: POWER OFF → INFO → MENU → MUTE → POWER ON

(Interval between key strokes: less than 3 sec)

To Exit: POWER OFF → POWER ON

2. Factory Remote

To Enter: POWER ON → INFO → FACTORY Key (Interval between key strokes: less than 3 sec)

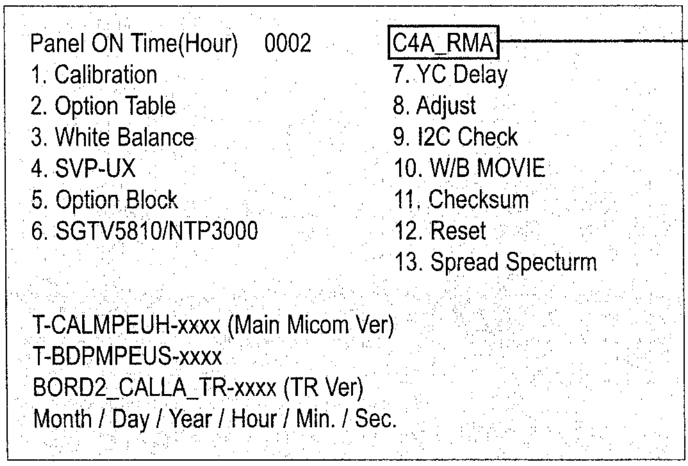
To Exit: POWER OFF → POWER ON

Press the Factory key twice with a key stroke interval of more than 1 second (Pressing once enters Aging Mode)

3. Settings when entering Factory mode
- Sharp Screen (Dynamic), Color Tone (Cool1), Factory (Dynamic CE Off)

4. Adjustment Procedures
- Channel ▲ ▼ Key : Select an item.
- Volume ◀ ▶ Key : Adjust the value up or down.
- MENU Key : Save the changes to the EEPROM and return to the higher-level mode.
- Using the Numeric (0~9) keys, you can select a channel.
- Using the SOURCE key, you can switch AV modes.

5. Initial SERVICE MODE DISPLAY State



```
Panel ON Time(Hour)   0002        C4A_RMA
1. Calibration                    7. YC Delay
2. Option Table                   8. Adjust
3. White Balance                  9. I2C Check
4. SVP-UX                         10. W/B MOVIE
5. Option Block                   11. Checksum
6. SGTV5810/NTP3000               12. Reset
                                  13. Spread Specturm

T-CALMPEUH-xxxx (Main Micom Ver)
T-BDPMPEUS-xxxx
BORD2_CALLA_TR-xxxx (TR Ver)
Month / Day / Year / Hour / Min. / Sec.
```

50": C5A_RMA

※ The version of the firmware displayed at the bottom of the screen may differ and the firmware is subject to change for the improvement of product functions.

※ If you have adjusted the settings in Service Mode, you have to reset the product.

4-2-3 Factory Data

★ The underlined are items applied during the service adjustment. None of the others should be adjusted.

1. Calibration

Item	Data
AV Calibration	Success
Comp Calibration	Success
PC Calibration	Success
HDMI Calibration	Success

2. Option Table(Service)

Item	PDP 42"	PDP 50"	Option index
	C4A_RMA initial value	C5A_RMA initial value	
Ready	OFF	OFF	ON / OFF
Inch Option	42"	50"	42" / 50"...
Panel Vender	AMLCDINT	AMLCDINT	AUO/CMO...
Gamma	OFF	OFF	ON / OFF
Panel Type	Normal1	Normal1	Normal1 / Normal2...
Model Option	Bord Plus	Bord Plus	Call / Lily / Brod Plus / Jasmine
Tuner	SEMCO	SEMCO	SEMCO / ALPS
Tuner TOP	8	8	0 ~ 31
Auto Power	ON	ON	ON / OFF
Nordic	OFF	OFF	ON / OFF
LNA Menu	ON	ON	ON / OFF
TTX On/Off	ON	ON	ON / OFF
TTX List	Flof	Flof	Flof / List
Carrier Mute	OFF	OFF	ON / OFF
High Deviation	OFF	OFF	ON / OFF
VOL.Curve	Small	Small	Small / Large
HDMI Hotplug	1	1	0 / 1
HDMI Clock Ctrl	1	1	0 / 1
HDMI Hotplug Dly	9	9	3~50
Hotel Option			
Hotel Mode	OFF	OFF	ON / OFF
Power On Channel	1	1	1 ~ 99
Power On Volume	10	10	1 ~ 100
Max Volume	100	100	1 ~ 100
Local Key Lock	OFF	OFF	ON / OFF
Power On Source	RF	RF	RF/Ext.1...
Shop Mode	OFF	OFF	ON / OFF
Color Space	ON	ON	ON / OFF
PC Ident	OFF	OFF	ON / OFF

Item	PDP 42"	PDP 50"	Option index
	C4A_RMA initial value	C5A_RMA initial value	
Language	English	English	English / German...
ANYNET+	ON	ON	ON / OFF
Ch.Table	SUWON	SUWON	SUWON / SESK / SEH / TTSEC
TTX Group	Auto	Auto	Auto / West Europe...
iDTV_Cntry	UK	UK	UK / France...

3. White Balance

Item	Range	Tv/AV/Scart	Comp/iDTV	PC	HDMI
Sub-Briteness	00H ~ FFH	128	128	128	128
R-offset	00H ~ FFH	128	128	128	128
G-offset	00H ~ FFH	128	128	128	128
B-offset	00H ~ FFH	128	128	128	128
Sub-Contrast	00H ~ FFH	128	128	128	128
R-Gain	00H ~ FFH	128	128	128	128
G-Gain	00H ~ FFH	128	128	128	128
B-Gain	00H ~ FFH	128	128	128	128

4. SVP-UX

① ComB Filter

Item	Range
Y-Filter	00H ~ FFH

② Sharpness

Item	Range	RF	AV	Comp 480i	Comp 480p	Comp 720p	Comp 1080i	HDMI	PC	iDTV
H2Gain	00 ~ 1FH	05H	05H	05H	05H	04H	04H	0AH	05H	05H
H4Gain	00 ~ 1FH	04H	0AH	05H	05H	02H	02H	0AH	05H	05H
V2Gain	00 ~ 1FH	0CH	0CH	0AH	0CH	0AH	0AH	10H	0AH	0AH
V4Gain	00 ~ 1FH	0CH	10H	0CH	0CH	0AH	0AH	10H	0AH	0AH
Sr2Gain	00 ~ 1FH	00H	00H	00H	00H	00H	00H	00H	00H	00H
Sr4Gain	00 ~ 1FH	00H	02H	00H	00H	02H	02H	04H	02H	02H
Sl2Gain	00 ~ 1FH	00H	00H	00H	00H	00H	00H	00H	00H	00H
Sl4Gain	00 ~ 1FH	00H	02H	00H	00H	02H	02H	04H	02H	02H
Peakth1	00H ~ FFH	06H	02H	03H	03H	03H	03H	03H	08H	04H
Peakth2	00H ~ FFH	2FH	2FH	2FH	2FH	2FH	2FH	2FH	2FH	2FH
Peskth3	00H ~ FFH	3FH	3FH	3FH	3FH	3FH	3FH	3FH	3FH	3FH

③ NR

Item	Range	Initial value
Y_NR_OFF	00H ~ FFH	00H
C_NR_OFF	00H ~ FFH	00H
Y_NR_ON	00H ~ FFH	00H
C_NR_ON	00H ~ FFH	00H

④ RGB Calibration

Item	Range	TV/AV/S_Video	Component	PC	HDMI
R-Offset	00H ~ FFH	3AH	40H	32H	82H
G-Offset	00H ~ FFH	3AH	40H	32H	82H
B-Offet	00H ~ FFH	3AH	40H	32H	82H
R-Gain	00H ~ FFH	A6H	92H	A9H	6CH
G-Gain	00H ~ FFH	A6H	92H	A9H	6CH
B-Gain	00H ~ FFH	A6H	92H	A9H	6CH

⑤ ADC Calibration

Item	Range	TV/AV/S_Video	Component	PC	HDMI
TCD3 Contrast	00H ~ FFH	79H	78H	78H	78H
TCD3 Brightness	00H ~ FFH	29H	20H	20H	20H
TCD3 CR	00H ~ FFH	80H	80H	80H	80H
TCD3 CB	00H ~ FFH	80H	80H	80H	80H
TCD3 Delay	00H ~ FFH	00H	00H	00H	00H
Analog Y Offset	00H ~ FFH	40H	3DH	44H	40H
Analog PB Offset	00H ~ FFH	80H	80H	44H	80H
Analog PR Offset	00H ~ FFH	80H	80H	44H	80H
Analog Y Gain	00H ~ FFH	D6H	B3H	A4H	80H
Analog PB Gain	00H ~ FFH	80H	B3H	ACH	80H
Analog PR Gain	00H ~ FFH	80H	B3H	A7H	80H
Black Level	00H ~ FFH	00H	00H	00H	00H
Svp Brightness	00H ~ FFH	00H	00H	00H	00H

⑥ Calibration Target

Item	Range	low	high	Delta
AV ADC	00H ~ FFH	10H	DCH	02H
COMP ADC	00H ~ FFH	10H	EBH	02H
PC ADC	00H ~ FFH	10H	DCH	04H
ALL RGB	00H ~ FFH	01H	EBH	0AH

⑦ Color Management

Item	Range	Initial value
Skin Direction	Reddish / Yellowish	Reddish
Skin Enhance	00H ~ FFH	00H
Green Stretch	00H ~ FFH	00H
Blue Stretch	00H ~ FFH	00H

5. Option Block

① FRC(Micronas)

② FRC2X

Item	Range	Initial value
OUTCON	1 ~ 3	0
GAMMA	1 ~ 7	0
OCC_MODE	0 / 1	0
FALLBACK	0 / 1	0
DBG_MARK	0 / 1	0
SPR_CBR	0 / 1	0
BIT_EXPAND	0 / 1	0
INV_BIT_EXPAND	0 / 1	0
REPEAT_MODE	0 / 1	0
DEMO_ON_OFF	0 / 1	0
MMU_RD_START	00H ~ FFH	00H
ME_RD_START	00H ~ FFH	00H
MC_RD_START	00H ~ FFH	00H
CMZL(0x36E)	00H ~ FFH	0H
BLOL(0x2A7)	00H ~ FFH	0H
LOGO(0x2A7)	00H ~ FFH	0H

③ FBE2

ITEM	Range	RF	AV/ S-Video	Comp 480i/576i	Comp 480p/576p	Comp 720p/1080i/1080p	HDMI	DTV	PC
Pattern Select	0 ~ 20	0	0	0	0	0	0	0	0
BS-On	0 / 1	1	1	1	1	1	1	1	1
B-Slope Gain	0 ~ 255	34	44	64	64	64	64	64	64
B-Tilt Min	0 ~ 255	20	20	20	20	20	20	20	20
B-Tilt Max	0 ~ 255	120	120	120	120	120	120	120	120
B-Tilt Slope	0 ~ 255	128	128	128	128	128	128	128	128
LFunc-Basis	0 ~ 255	30	20	50	40	70	55	75	55
Hfunc-Basis	0 ~ 255	30	40	50	40	75	65	88	65
Mean-Offset1	0 ~ 255	20	100	75	75	75	75	75	75
Mean Offset2	0 ~ 255	120	200	155	155	225	225	225	225
Mean Slope	0 ~ 255	56	56	45	45	85	85	85	85
Input Offset	0 ~ 255	128	128	128	128	128	128	128	128
Input Gain	0 ~ 255	128	128	128	128	128	128	128	128
ACR Offset	0 ~ 128	15	15	15	15	15	15	15	15
ACR Th1	0 ~ 255	30	30	30	30	30	30	30	30
ARC Th2	0 ~ 255	130	130	100	130	130	130	130	130
Skin Enable	0 / 1	1	1	1	1	1	1	1	1
Skin Tu	0 ~ 255	165	165	150	150	165	165	128	165
Skin Tv	0 ~ 255	140	140	140	140	128	128	128	128
M Skin Tu	0 ~ 255	128	128	128	128	128	128	128	128
M Skin TV	0 ~ 255	128	128	128	128	128	128	128	128
Sub Color	0 ~ 255	115	128	135	135	140	150	143	150
M-Au-Sub Color	0 ~ 255	128	128	128	128	128	128	128	128
M-Wi-Sub Color	0 ~ 255	128	128	128	128	128	128	128	128
MW-Skin-Tu	0 ~ 255	128	128	128	128	128	128	128	128
MW-Skin-Tv	0 ~ 255	128	128	128	128	128	128	128	128

④ Pdp Logic

ITEM	Range	Initial value
Pattern Srlect	0 ~ 63	0
Data updata	ON / OFF	OFF
Data Type	42"EU MRT/42"EU MESH/...	42"EU MRT
CDC Sw	ON / OFF	OFF
CDC Strengh Th	0 ~ 31	0
BRE Sw	ON / OFF	OFF
FRC Repeat Mode	ON / OFF	OFF
FRC CBG Mark On	0 ~ 15	0
ERC Bypass	ON / OFF	OFF
Panel Type	-	0H
Panel Inch	-	SD
Panel Version	-	
Logic Sw Version	-	0H 0H 0H

6. SGTV5810/NTP3000

ITEM	Range	Initial value
ID Tone Shift	1H ~ FH	01H
ID Tone Thresh	00H ~ FFH	7FH
Demod Prescaler	00H ~ 20H	13H
Master Volume	00H ~ 30H	13H
PWM Modulation	80H ~ F2H	F1H
DRC Threshold	00H ~ 7FH	06H
Speaker EQ	ON / OFF	OFF

7. YC Delay

ITEM	Range	Initial value
RF PAL-B/G	00H ~ FFH	AAH
RF PAL-D/K	00H ~ FFH	99H
RF PAL-I	00H ~ FFH	99H
RF SECAM-B/G	00H ~ FFH	88H
RF SECAM-D/K	00H ~ FFH	44H
RF SECAM-L/L'	00H ~ FFH	88H
RF NTSC 3.58	00H ~ FFH	44H
RF NTSC 4.43	00H ~ FFH	CCH
AV PAL	00H ~ FFH	AAH
AV SECAM	00H ~ FFH	88H
AV NTSC 3.58	00H ~ FFH	30H
AV NTSC 4.43	00H ~ FFH	AAH
AV PAL60	00H ~ FFH	77H

8. Adjust

ITEM	Range	Initial value
Video Mute Time	0 ~ 255	10
Dynamic Contrast	ON / OFF	ON
Dynamic Dimming	ON / OFF	ON
Dynamic CE	ON / OFF	OFF
LNA PLUS		
RFDB-1 Level	0 ~ 255	2
RFDB-2 Level	0 ~ 255	5
RFDB-3 Level	0 ~ 255	7
RFDB-4 Level	0 ~ 255	24
Magazine LNA	ON / OFF	OFF
PixelShift Test	ON / OFF	OFF
Debug	ON / OFF	OFF
ACR	ON / OFF	OFF
D-Watchdog	ON / OFF	ON
UART Select	MAIN / IDTV / PDP Lvds ON / PDP Lvds /OFF	OFF

9. I2C Check

10. W/B MOVIE

ITEM	Range	TV/AV/S_Video	Component	PC	HDMI	Scart1/2
WB Movie	ON / OFF	OFF	OFF	OFF	OFF	OFF
Color Mode	Movie	Movie	Dynamic	Dynamic	Dynamic	Dynamic
Color Tone		Cool1	Cool1	Cool1	Cool1	Cool1
Msub Brigh	0 ~ 255	128	128	128	128	128
Msub Contr	0 ~ 255	128	128	128	128	128
W1_RGAIN	0 ~ 255	157	161	144	161	157
W1_BGAIN	0 ~ 255	76	74	117	76	76
W1_R_OFFS	0 ~ 255	119	119	127	118	119
W1_B_OFFS	0 ~ 255	138	140	110	141	138
W2_RGAIN	0 ~ 255	142	143	149	142	142
W2_BGAIN	0 ~ 255	48	47	93	51	48
W2_R_OFFS	0 ~ 255	129	127	124	128	129
W2_B_OFFS	0 ~ 255	143	145	110	143	143
NO_RGAIN	0 ~ 255	141	139	137	141	141
NO_BGAIN	0 ~ 255	104	102	123	104	104
NO_R_OFFS	0 ~ 255	126	125	126	121	126
NO_B_OFFS	0 ~ 255	136	133	114	133	136
C2_RGAIN	0 ~ 255	124	122	123	125	124
C2_BGAIN	0 ~ 255	142	141	156	143	142
C2_R_OFFS	0 ~ 255	128	129	117	128	128
C2_B_OFFS	0 ~ 255	128	127	116	128	128
Movie Contr	0 ~ 100	100	100	100	100	100
Movie Brigh	0 ~ 100	45	45	45	45	45
Movie Color	0 ~ 100	55	55	55	55	55
Movie Sharp	0 ~ 100	75	75	75	75	75

11. Checksum xxxx

12. Reset

13. Spread Spectrun

ITEM	Range	Initial value
Spectrum	ON / OFF	ON
Delta	-128 ~ +128	0
Positive	0 ~ 99	8
Negative	0 ~ 99	2
Speed	0 ~ 7	0
Time	0 ~ 7	4
FBE Spectrum	ON / OFF	OFF
FEE Delta	0 ~ 5	0

4-2-4 Service Adjustment

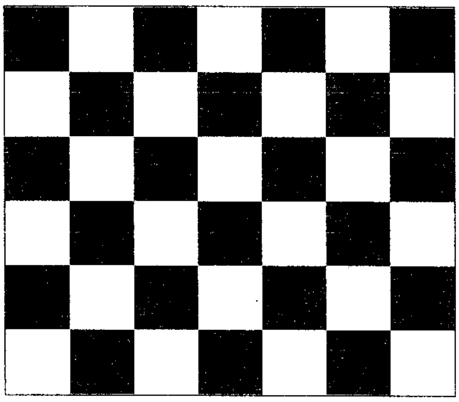
■ White Balance - Calibration

If picture color is wrong, do calibration first.

Execute calibration in Factory Mode

1. Source : VIDEO
2. Setting Mode : PAL Video (MODE : #2)
3. Pattern : Pattern #24 (Chess Pattern)
4. Use Equipment : K-7256 or Equipment of equality level
5. Work order
   1) Enter by Factory Mode select "1. CALIBRATION".
   2) Select "AV CALIBRATION" again in CALIBRATION MENU.
   3) After Completing Calibration, come out "Av success". OSD on the screen (bottom-side) for about 3 seconds.

Source AV : PAL composite, Component : 1280*720/60Hz
PC : 1024*768/60Hz



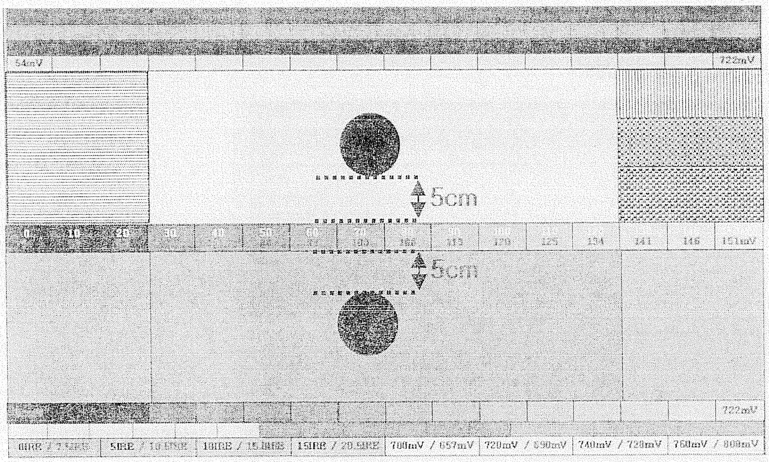
(Chess Pattern)

White Balance - Adjustment

If picture color is wrong, check White Balance condition.

Equipment : CA210, Patten : Toshiba
Adjust W/B in Factory Mode

Sub brightness and R/G/B Offset controls low light region
Sub contrast and R/G/B Gain controls high light region
Source AV : PAL composite, Component : 1280*720/60Hz,
HDMI[DVI] : 1280*720/60Hz


54mV
722mV
5cm
0
10
20
30
40
50
60
70
80
90
100
100
106
113
120
125
134
141
146
151mV
5cm
722mV
700mV / 657mV
720mV / 690mV
740mV / 720mV
760mV / 800mV

(SAMSUNG WHITE BALANCE Adjustment PATTERN with FPD)

[Test Pattern : MSPG-945 Series Pattern #16]

- * Color temperature
  1500K +/-500, -6 ~-20 MPCD
- * Color coordinate
  H/L : 270/280 +/- 2
  L/L : 270/280 +/- 3, 2.1 Ft +/-0.05 Ft

Conditions for Measurement

1. On the basis of toshiba ABL pattern : High Light level (57 IRE)
   - INPUT SIGNAL GENERATOR : MSPG-925LTH
   * Mode No 2 : 744X484@60 Hz
   No 6 : 1280X720@60 Hz
   No 21 : 1024X768@60 Hz
   * Pattern No 36 : 16 Color Pattern
   No 16 : Toshiba ABL Pattern

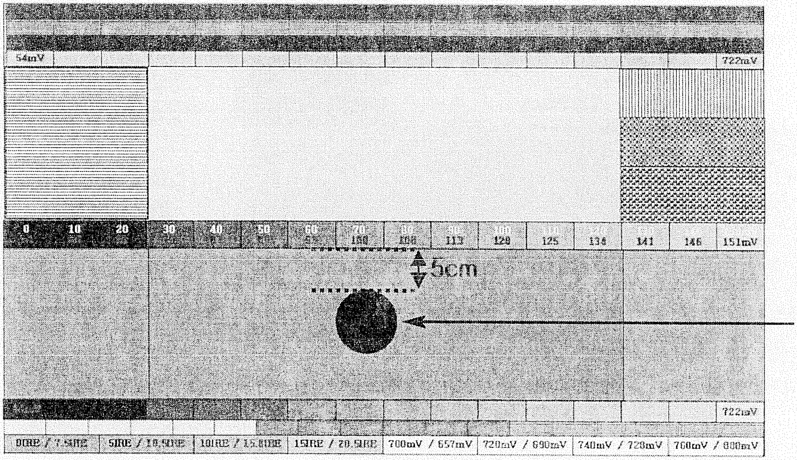
2. Optical measuring device : CA210 (FL)
   Please use the MSPG-925 LTH generator for model PS-42Q91H, PS-50Q91H.

Method of Adjustment

1. Adjust the white balance of AV, Component and DVI Modes.
   (AV → Component)
   a) Set the input to the mode in which the adjustment will be made (RF → DTV → PC → DVI).
      * Input signal - VIDEO Mode : Model #2 (744*484 Mode), Pattern #16
      - DTV, DVI Mode : Model #6 (1280*720 Mode), Pattern #16
      - HDMI Mode : Model #6 (1280*720 Mode), Pattern #16

   b) Enter factory color control, confirm the data.

   c) Adjust the low light. (Refer to table 1, 2 in adjustment position by mode)
      - Adjust sub - Brightness to set the 'Y' value.
      - Adjust red offset ('x') and blue offset ('y') to the color coordinates.

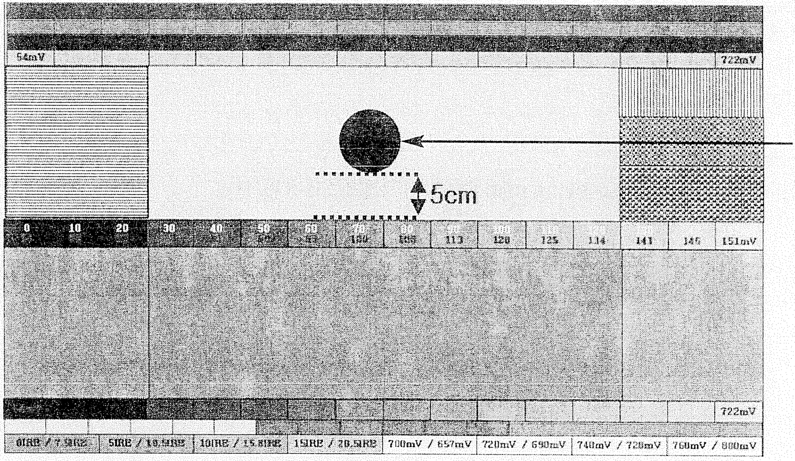

54mV
722mV
0
10
20
30
40
50
60
70
80
90
100
110
120
100
108
113
120
125
134
141
146
151mV
5cm
722mV
0IRE / 7.5IRE
5IRE / 10.5IRE
10IRE / 15.8IRE
15IRE / 20.5IRE
700mV / 657mV
720mV / 690mV
740mV / 720mV
760mV / 800mV

Low light
Measurement point

(SAMSUNG WHITE BALANCE Adjustment PATTERN with FPD)

* Do not adjust green offset data.

   d) Adjust the high light. (Refer to table 1, 2 in adjustment position by mode)
      - Adjust red gain ('x') and blue gain ('y') to the color coordinates.


54mV
722mV
5cm
0
10
20
30
40
50
60
70
80
100
108
113
120
125
134
141
146
151mV
722mV
0IRE / 7.5IRE
5IRE / 10.5IRE
10IRE / 15.8IRE
15IRE / 20.5IRE
700mV / 657mV
720mV / 690mV
740mV / 720mV
760mV / 800mV

Hight light
Measurement point

(SAMSUNG WHITE BALANCE Adjustment PATTERN with FPD)

* Do not adjust the green gain and sub-contrast (Y) data.

4-2-5 Replacements & Calibration

* PDP 42" Check items listed after changing each

Replaced assembly items	Check Items
ASSY PCB MISC-MAIN	1) Auto Program 2) White Balance Adjust
SMPS-PDP TV	Vs, Va voltage check and adjust
ASSY PDP MODULE P-LOGIC MAIN	Not to be adjusted
ASSY PDP MODULE P-X-MAIN	
ASSY PDP MODULE P-Y-MAIN	
ASSY PDP MODULE P-Y-MAIN SCAN BUFFER	
ASSY PDP MODULE P-ADDRESS E BUFFER	
ASSY PDP MODULE P-ADDRESS F BUFFER	
ASSY BOARD P-SIDE A/V	

* PDP 50" Check items listed after changing each

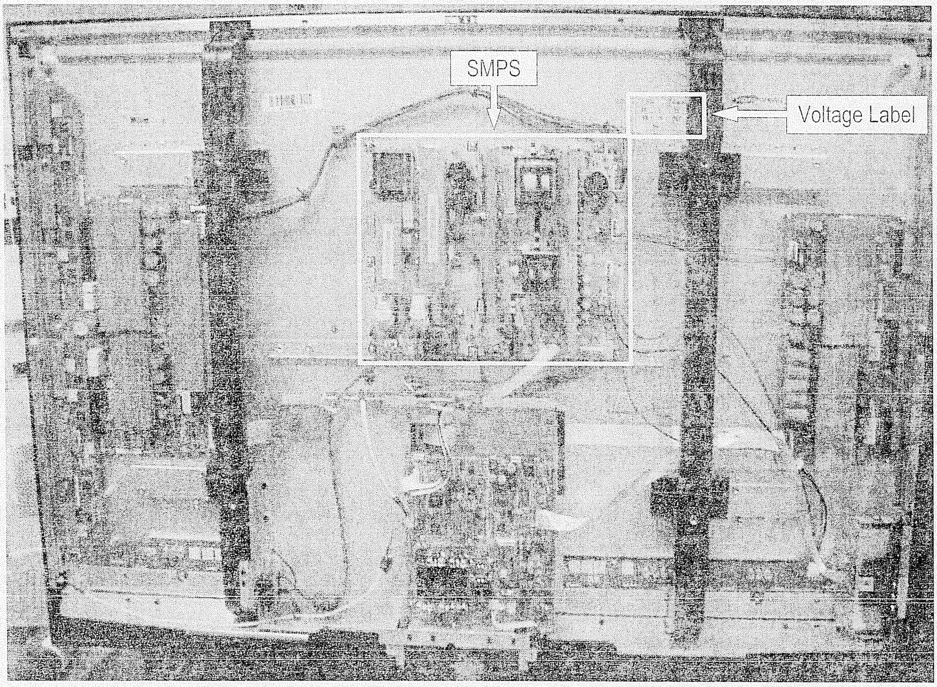
Replaced assembly items	Check Items
ASSY PCB MISC-MAIN	1) Auto Program 2) White Balance Adjust
SMPS-PDP TV	Vs, Va voltage check and adjust
ASSY PDP MODULE P-LOGIC MAIN	Not to be adjusted
ASSY PDP MODULE P-X-MAIN	
ASSY PDP MODULE P-Y-MAIN	
ASSY PDP MODULE P-Y-MAIN SCAN BUFFER	
ASSY PDP MODULE P-Y-MAIN SCAN BUFFER	
ASSY PDP MODULE P-ADDRESS E BUFFER	
ASSY PDP MODULE P-ADDRESS F BUFFER	
ASSY BOARD P-SIDE A/V	

※ When replacing the SMPS or PDP panel, you have to check the voltage printed on the panel sticker and adjust it.

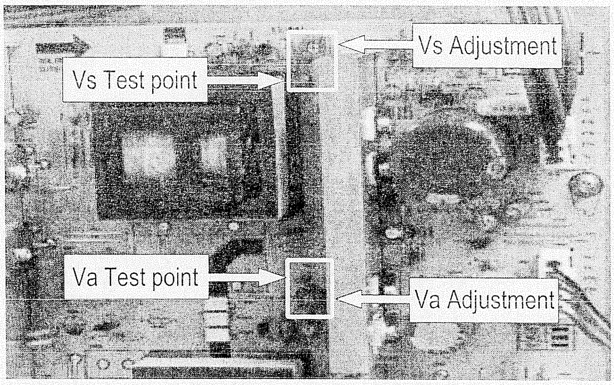
Voltage Adjustment

1. After replacing the SMPS or PDP panel, you must adjust the voltage referring to the voltage label printed on the panel.
(If you do not adjust the voltage, an abnormal discharge symptom may appear.)

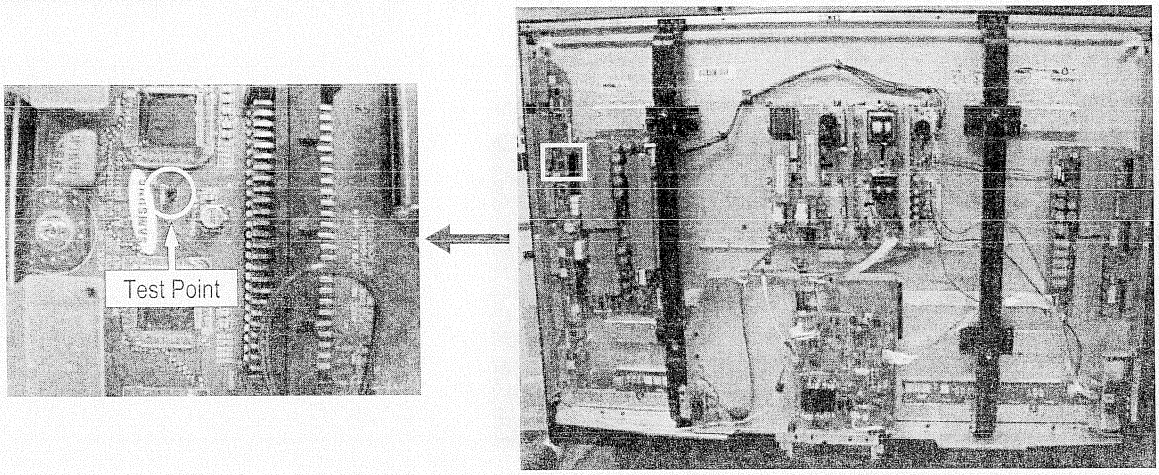
	Value	Board Adjustment
Vs	210	SMPS
Va	63	
Vset	-	
Ve	94	
Vscan	-190	


SMPS
Voltage Label

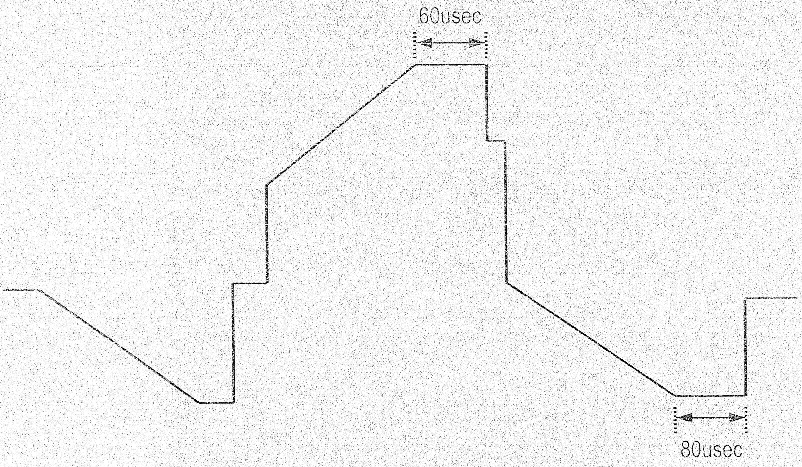
2. A point of adjusting SMPS-MAIN voltage.

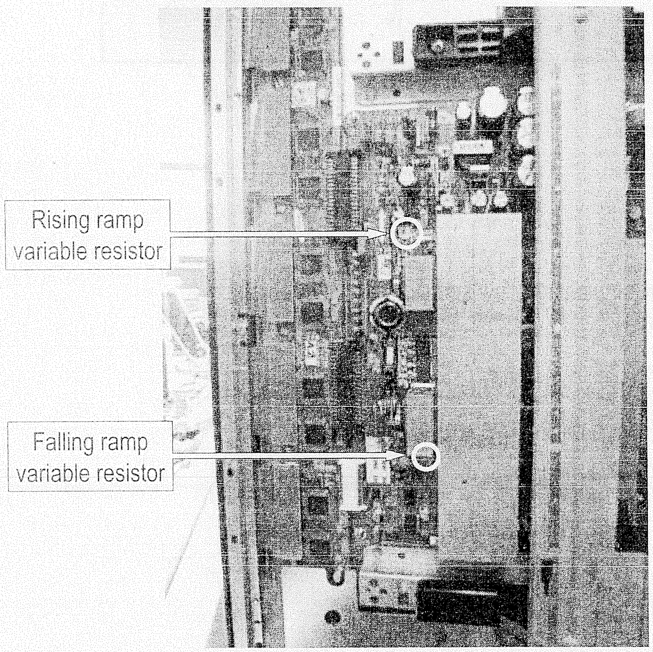

Vs Adjustment
Vs Test point
Va Test point
Va Adjustment

■ Y-RR and Y-FR controls



Set the main reset (rising : 60usec, falling : 80usec) by change the value of variable resistor.

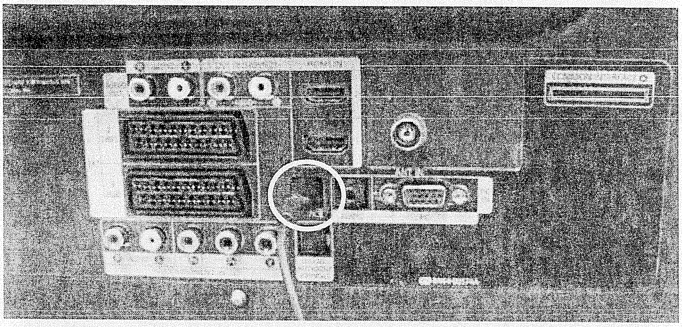

60usec
80usec


Rising ramp variable resistor
Falling ramp variable resistor

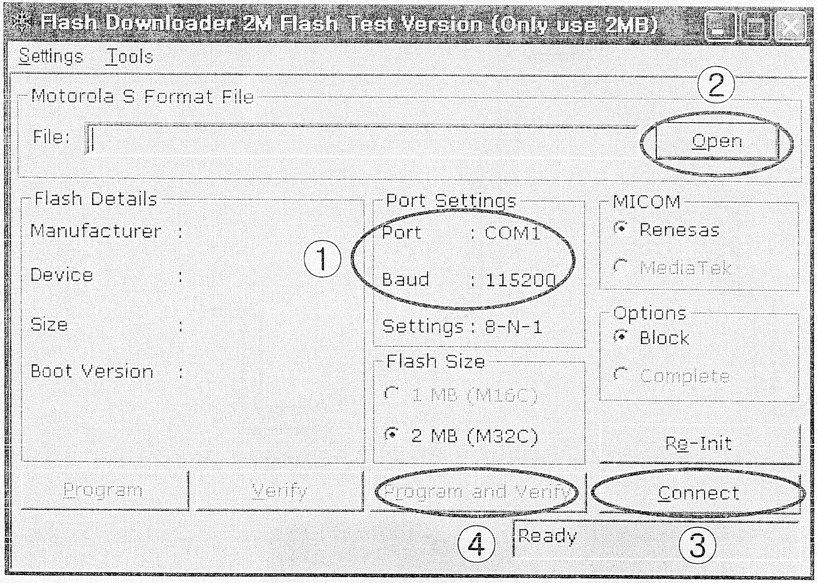
4-3 Upgrade

4-3-1 How to Update Flash ROM (with RS-232C Cable)

1. Connect Set (Service Jack) and Jig Cable to execute Program Update.



2. Turn Off (On Stand by mode) the Set
   - Run Down load tool


Flash Downloader 2M Flash Test Version (Only use 2MB)
Settings
Tools
②
①
④
③
Open
Program
Verify
Program and Verify
Re-Init
Connect

Motorola S Format File

File:

Flash Details

Manufacturer :

Device :

Size :

Boot Version :

Port Settings

Port : COM1

Baud : 115200

Settings : 8-N-1

Flash Size

○ 1 MB (M16C)

● 2 MB (M32C)

MICOM

● Renesas

○ MediaTek

Options

● Block

○ Complete

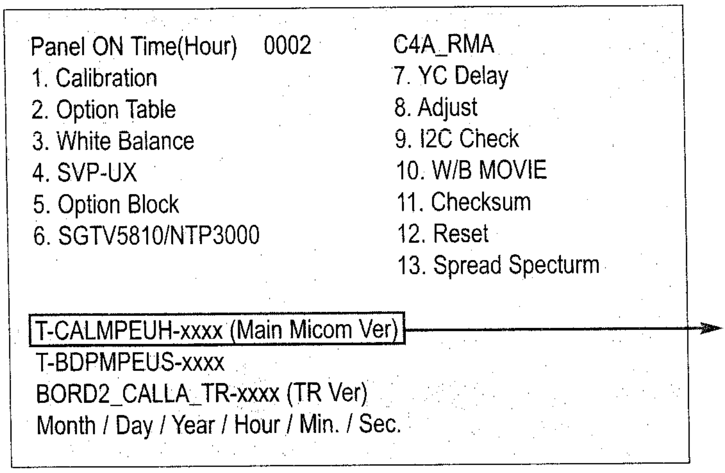
Ready

1) Check ①
2) Select MOT file by Open ②
3) Click Connect Button ③
4) Turn On the Set
5) Click ④

3. Turn off (= AC Power off) the Set (waiting a few seconds) and turn on again.
   S/W Down Load Time: 6min

4-3-2 How to Check the Version of the Program

1. Procedures for checking in the Factory Menu.
   When entering Factory Mode, the version of the software is displayed at the bottom of the menu as described on page 4-17.



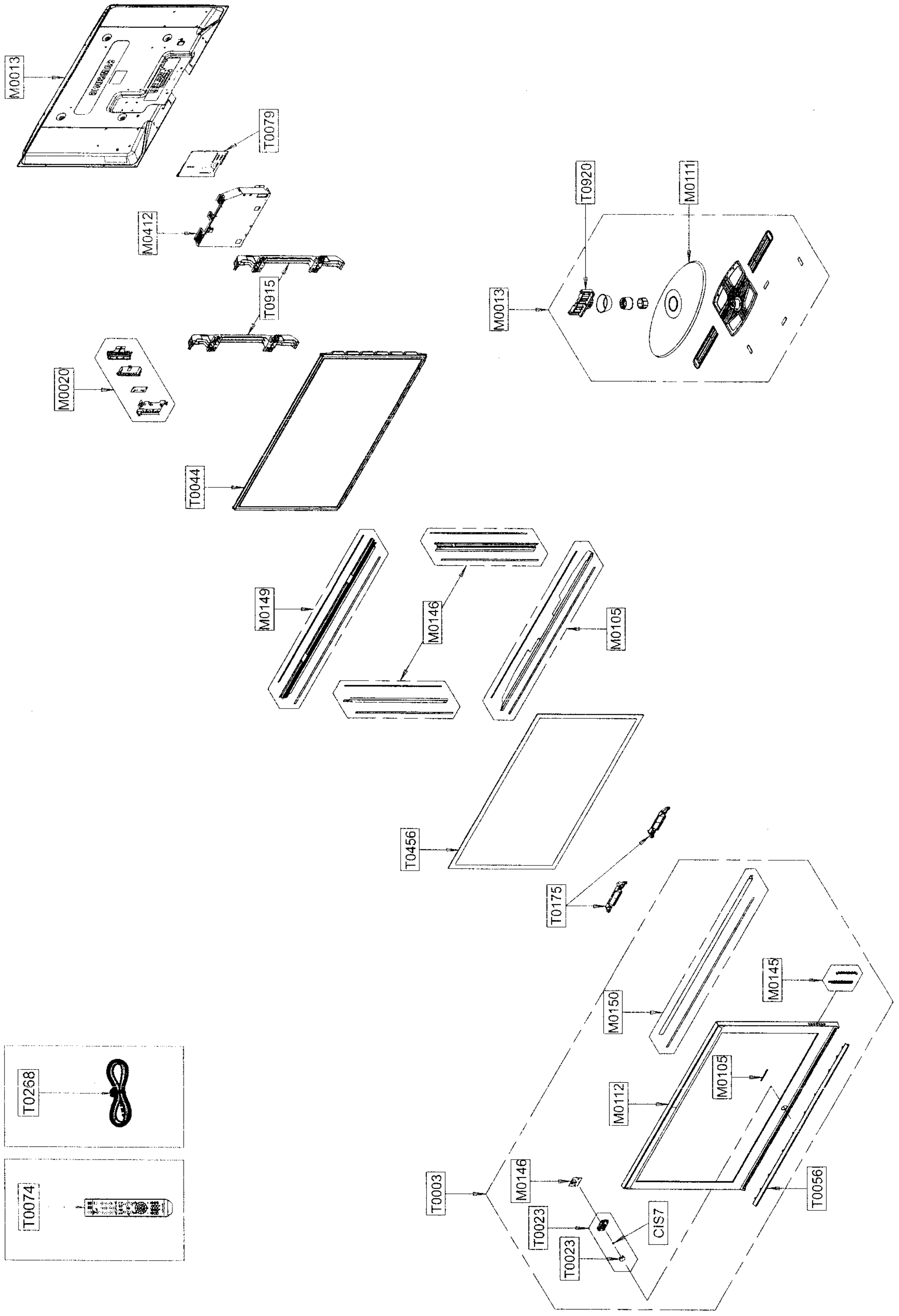
```
Panel ON Time(Hour)    0002        C4A_RMA
1. Calibration                     7. YC Delay
2. Option Table                    8. Adjust
3. White Balance                   9. I2C Check
4. SVP-UX                          10. W/B MOVIE
5. Option Block                    11. Checksum
6. SGTV5810/NTP3000                12. Reset
                                   13. Spread Specturm

T-CALMPEUH-xxxx (Main Micom Ver)
T-BDPMPEUS-xxxx
BORD2_CALLA_TR-xxxx (TR Ver)
Month / Day / Year / Hour / Min. / Sec.
```

S/W Version

5. Exploded View & Part List

5-1 PS42Q92HX/XEC Exploded View


M0013
T0079
M0412
T0915
M0020
T0044
T0920
M0111
M0013
M0149
M0146
M0105
T0456
T0175
M0145
M0150
M0105
M0112
T0268
T0074
T0003
M0146
T0023
T0023
CIS7
T0056

Loc. No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
CIS7	AA61-60003B	SPRING ETC-CS	-,SUS304,-,-,OD11.2,N7,OD1	1	S.N.A	
M0013	BN96-04714B	ASSY STAND P-BASE	C9/Q9,ABS HB SF-0507,B	1	S.A	
M0013	BN96-04709A	ASSY COVER P-REAR	42Q9/C9,EU(Ready),PCM	1	S.A	
M0020	BN96-04849B	ASSY BOARD P-SIDE AV	CALLA 42",SJ07-01-0	1	S.N.A	
M0105	BN67-00190A	LENS-LED	42Q9,PC,light blue,Material of	1	S.N.A	
M0111	BN63-03049B	COVER-STAND	42Q9,ABS SF-0507,BK23	1	S.N.A	
M0112	BN63-03066D	COVER-FRONT	42Q9,ABS,HB,BK23,STEAM MOLD	1	S.N.A	
M0145	BN96-04853B	ASSY BOARD P-FUNCTION	Lily/Calla,CT5000-	1	S.A	
M0146	BN96-04687A	ASSY BRACKET P-FILTER SIDE	42Q9,AL6063,T	2	S.N.A	
M0146	BN96-04861D	ASSY BOARD P-POWER & IR	Lily/Calla,CT500	1	S.A	
M0149	BN96-04685A	ASSY BRACKET P-FILTER TOP	42Q9,AL6063,T1	1	S.N.A	
M0150	BN96-04686A	ASSY BRACKET P-FILTER BOTTOM	42Q9,AL6063	1	S.N.A	
M0150	BN96-04691B	ASSY BRACKET P-SUPPORT FILTER	42Q9,Al 60	1	S.N.A	
M0412	BN96-04903C	ASSY BRACKET P-PCB	42Q9,SECC T0.8	1	S.N.A	
T0003	BN96-04708D	ASSY COVER P-FRONT	42Q9,ABS HB,BK23,STEA	1	S.A	
T0023	BN96-04707A	ASSY COVER P-KNOB POWER	C9/Q9,ABS HB	1	S.N.A	
T0023	BN64-00567A	KNOB POWER	42Q9,PC,VIOLET	1	S.N.A	
T0044	BN96-04592A	ASSY PDP MODULE P-MODULE	42HD W2,PL42AX0	1	S.A	⚠
T0056	BN63-03056B	COVER-DECORATION	42Q9,ABS,SF-0500,HB,Tit	1	S.N.A	
T0074	BN59-00602A	REMOCON	BORDEAUX PLUS,TM87C,samsung	1	S.A	
T0079	BN94-01182B	ASSY PCB MISC-MAIN	PS42Q91H,PS42Q92H,EU,	1	S.A	⚠
T0175	BN96-04819A	ASSY SPEAKER P	8ohm,Q9 42inch,10W,4P con	1	S.A	
T0268	3903-000145	CBF-POWER CORD	DT,EU,FP3/YES,U(IEC C13-R	1	S.A	
T0456	BN67-00183A	GLASS-FILTER EMI	42" Q7,P7,No B/C,MRT,42	1	S.A	⚠
T0915	BN61-02894B	HOLDER-MODULE	42Q9,PC ABS	2	S.N.A	
T0920	BN61-02990A	GUIDE-STAND	42Q9,PC GF20%	1	S.N.A	

5-2 PS42Q92HX/XEC Service Item

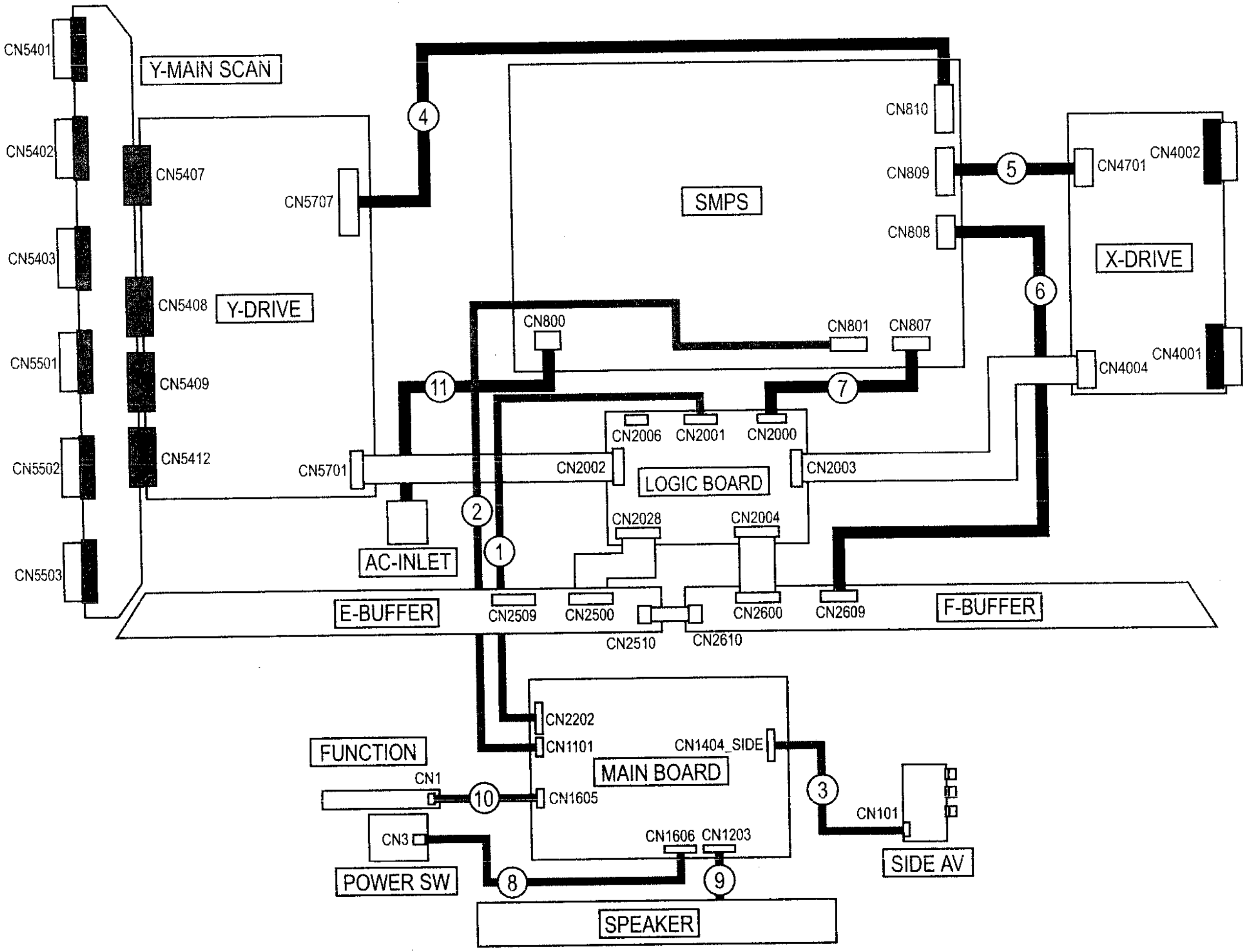
※ This is the list which is available to repair the real material at the time of service.

Loc. No.	Code No.	Description	Specification	Q'ty	Remark
M0013	BN96-04709A	ASSY COVER P-REAR	42Q9/C9,EU(Ready),PCM	1	
M0013	BN96-04714B	ASSY STAND P-BASE	C9/Q9,ABS HB SF-0507,B	1	
M2893	BN39-00859A	LEAD CONNECTOR	CALLA 50",UL20276#30,UL/C	1	
M2893	BN39-00881A	LEAD CONNECTOR	LILLY 42"/50",UL1007#26,U	1	
T0003	BN96-04708D	ASSY COVER P-FRONT	42Q9,ABS HB,BK23,STEA	1	
T0044	BN96-04592A	ASSY PDP MODULE P-MODULE	42HD W2,PL42AX0	1	⚠
T0074	BN59-00602A	REMOCON	BORDEAUX PLUS,TM87C,samsung 28p+	1	
T0079	BN94-01182B	ASSY PCB MISC-MAIN	PS42Q91H,PS42Q92H,EU,	1	⚠
T0175	BN96-04819A	ASSY SPEAKER P	8ohm,Q9 42inch,10W,4P con	1	
T0764	BN44-00161A	SMPS-PDP TV	HPS4253,SEM,AC/DC,370W,AC100	1	⚠
T1910	BN96-04593A	ASSY PDP MODULE P-X-MAIN	42HD W2,PL42AX0	1	⚠
T1911	BN96-04594A	ASSY PDP MODULE P-Y-MAIN	42HD W2,PL42AX0	1	⚠
T1914	BN96-04597A	ASSY PDP MODULE P-ADDRESS-E BU	42HD W2,P	1	
T1915	BN96-04598A	ASSY PDP MODULE P-ADDRESS-F BU	42HD W2,P	1	
T1917	BN96-04596A	ASSY PDP MODULE P-LOGIC MAIN	42HD W2,PL4	1	
T9698	BN96-04595A	ASSY PDP MODULE P-Y-MAIN SCAN	42HD W2,PL	1	

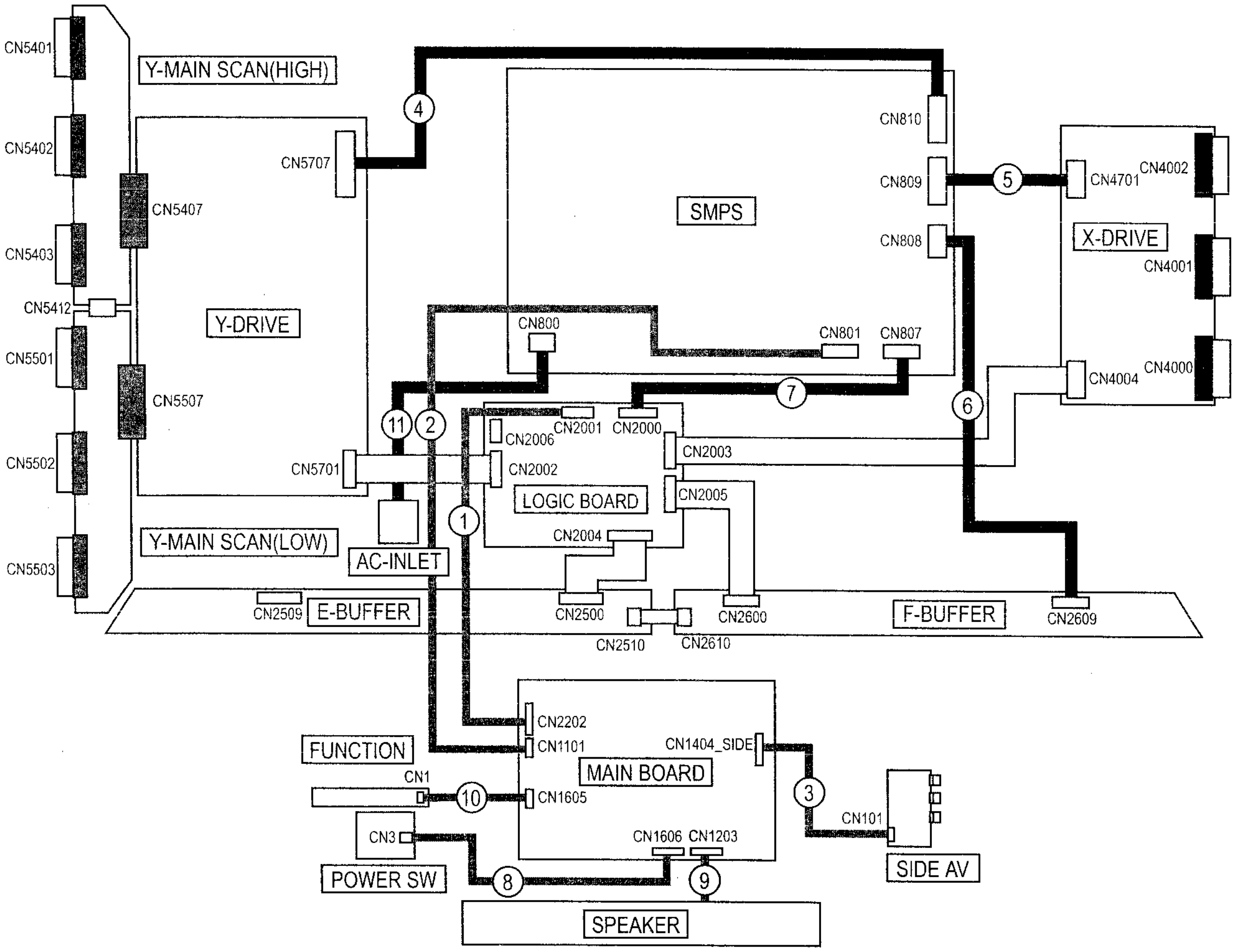
6. Wiring Diagram

6-1 Overall Wiring

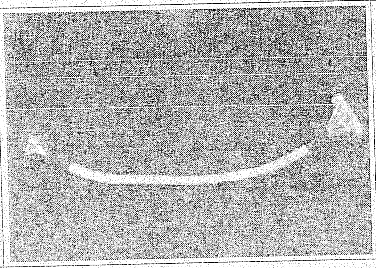
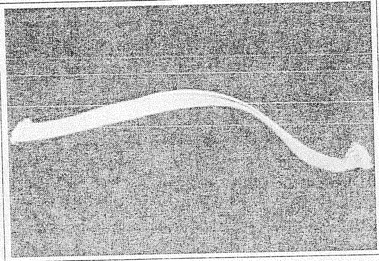
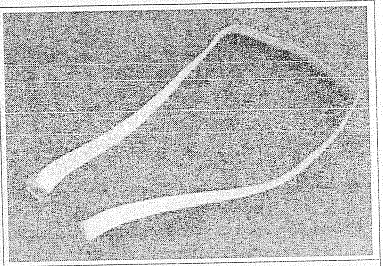
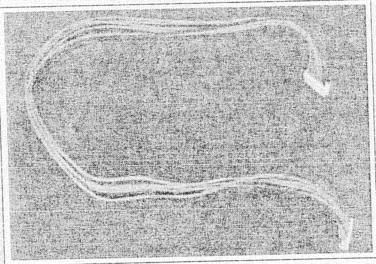
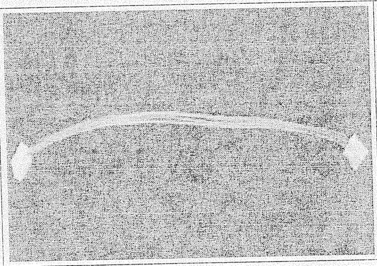
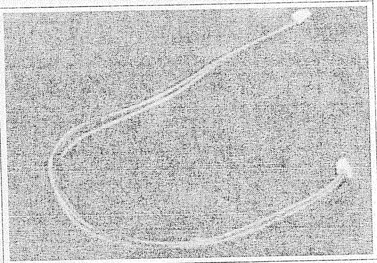
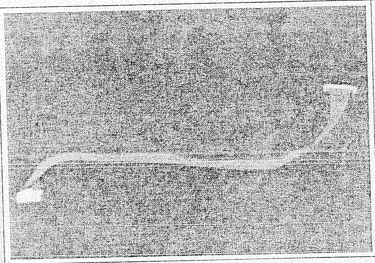
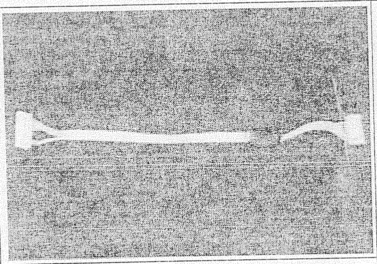
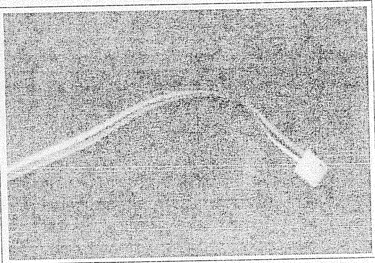
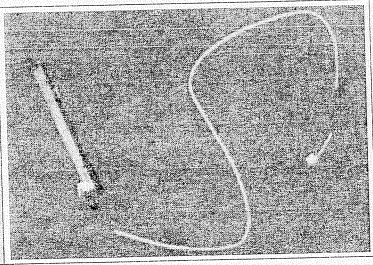
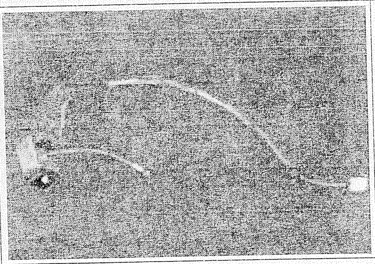
<42" Overall Wiring>


Y-MAIN SCAN
CN5401
CN5402
CN5403
CN5501
CN5502
CN5503
CN5407
CN5408
CN5409
CN5412
Y-DRIVE
CN5707
CN5701
SMPS
CN810
CN809
CN808
CN800
CN801
CN807
X-DRIVE
CN4701
CN4002
CN4004
CN4001
LOGIC BOARD
CN2006
CN2001
CN2000
CN2002
CN2003
CN2028
CN2004
AC-INLET
E-BUFFER
CN2509
CN2500
CN2510
F-BUFFER
CN2610
CN2600
CN2609
MAIN BOARD
CN2202
CN1101
CN1404_SIDE
CN1605
CN1606
CN1203
FUNCTION
CN1
CN3
POWER SW
SIDE AV
CN101
SPEAKER
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪

<50" Overall Wiring>


CN5401
Y-MAIN SCAN(HIGH)
CN5402
CN5407
CN5403
CN5412
CN5501
CN5507
CN5502
Y-MAIN SCAN(LOW)
CN5503
Y-DRIVE
CN5707
CN5701
AC-INLET
CN2509
E-BUFFER
SMPS
CN810
CN809
CN808
CN800
CN801
CN807
X-DRIVE
CN4701
CN4002
CN4001
CN4004
CN4000
LOGIC BOARD
CN2006
CN2001
CN2000
CN2002
CN2003
CN2005
CN2004
CN2500
CN2510
CN2600
CN2610
F-BUFFER
CN2609
MAIN BOARD
CN2202
CN1101
CN1404_SIDE
CN1605
CN1606
CN1203
FUNCTION
CN1
POWER SW
CN3
SPEAKER
SIDE AV
CN101
1
2
3
4
5
6
7
8
9
10
11

※ The code number of cable(Lead-connector) can be changed, see "5. Exploded View & Part List."

Use	① LVDS 31P-30P	② POWER 24P	③ Flat Cable
Code	BN39-00859A	BN39-00881A	42" - BN96-05164A 50" - BN96-05176A
Photo			
Use	④ Y Drive	⑤ X Drive	⑥ Address
Code	-	-	-
Photo			
Use	⑦ Logic	⑧ Front	⑨ SPEAKER
Code	-	-	-
Photo			
Use	⑩ FUNCTION	⑪ AC_INPUT	
Code	-	42" - 2901-001378 50" - 2901-001340	
Photo			

6-1-1 Pin Connection

① CN2202(MAIN B'D) ↔ CN2001(LOGIC B'D)			
Pin No.	Signal	Pin No.	Signal
1	RxIN0-	16	NC
2	RxIN0+	17	GND
3	RxIN1-	18	WP
4	RxIN1+	19	SCL
5	RxIN2-	20	SDA
6	RxIN2+	21	LVDS Opt
7	RxINCLK-	22	DCC Opt
8	RxINCLK+	23	GND
9	RxIN3-	24	GND
10	RxIN3+	25	GND
11	NC	26	Vdd
12	NC	27	Vdd
13	NC	28	Vdd
14	NC	29	Vdd
15	NC	30	Vdd

② CN1101(MAIN B'D) ↔ CN801(MAIN SMPS)			
Pin No.	Signal	Pin No.	Signal
1	PS_ON	13	5V
2	N/C (Auto_V)	14	5V
3	STBY	15	5V
4	GND_STBY	16	5V
5	GND_18V AMP	17	GND_12V
6	GND_18V AMP	18	GND_12V
7	18V AMP	19	12V
8	18V AMP	20	GND_12V
9	GND_5V	21	12V
10	GND_5V	22	12V
11	GND_5V	23	N.C(FAN_ON)
12	GND_5V	24	N.C(FAN_DET)

③ CN1404(MAIN B'D) ↔ CN101(SIDE AV)							
Pin No.	Signal	Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	GND	12	TXC-	23	NC	34	VIDEO_SR_IN
2	TX2+	13	GND	24	NC	35	VIDEO_SL_IN
3	TX2-	14	MICOM_CEC	25	GND	36	HP_IDENT
4	GND	15	GND	26	SVHS_IDENT	37	HP_OUT_R
5	TX1+	16	TSCL	27	SVHS_Y	38	HP_OUT_L
6	TX1-	17	TSDA	28	GND	39	USB_VCC
7	GND	18	LSCL	29	SVHS_C	40	B1.8V
8	TX0+	19	HDMI3_5V	30	GND	41	B3.3V
9	TX0-	20	HPD_SIL9185	31	VIDEO_IDENT		
10	GND	21	DDC_WP	32	VIDEO_CVBS		
11	TXC+	22	GND	33	GND		

④ CN810(SMPS) ↔ CN5707(Y B'D)	
Pin No.	Signal
1	Vg
2	GND
3	GND
4	GND
5	Vs
6	Vs

⑤ CN809(SMPS) ↔ CN4701(X B'D)	
Pin No.	Signal
1	Vg
2	GND
3	GND
4	Vs
5	Vs

⑥ CN808(SMPS) ↔ CN2609(E-BUFFER)	
Pin No.	Signal
1	Va
2	GND
3	5.3V

⑦ CN807(SMPS) ↔ CN2000(LOGIC B'D)	
Pin No.	Signal
1	STBY
2	VS_ON
3	N/C
4	PS_ON
5	RTN
6	5.3V
7	RTN
8	RTN
9	5.3V
10	5.3V

⑧ CN1606(MAIN B'D) ↔ POWER&IR	
Pin No.	Signal
1	IR
2	GND
3	A5V_1
4	LED_STB
5	BUZZER
6	KEY_INPUT1
7	KEY_INPUT2
8	GND
9	B5V
10	LED_CTRL

⑨ CN1203(MAIN B'D) ↔ SPEAKER	
Pin No.	Signal
1	R+_OUT
2	R-_OUT
3	L+_OUT
4	L-_OUT

⑩ CN1605(MAIN B'D) ↔ FUNCTION	
Pin No.	Signal
1	KEY_INPUT1
2	KEY_INPUT2
3	GND

⑪ CN800(SMPS) ↔ AC INLET	
Pin No.	Signal
1	AC Neutral
2	N/C
3	AC Live

6-1-2 Connector role

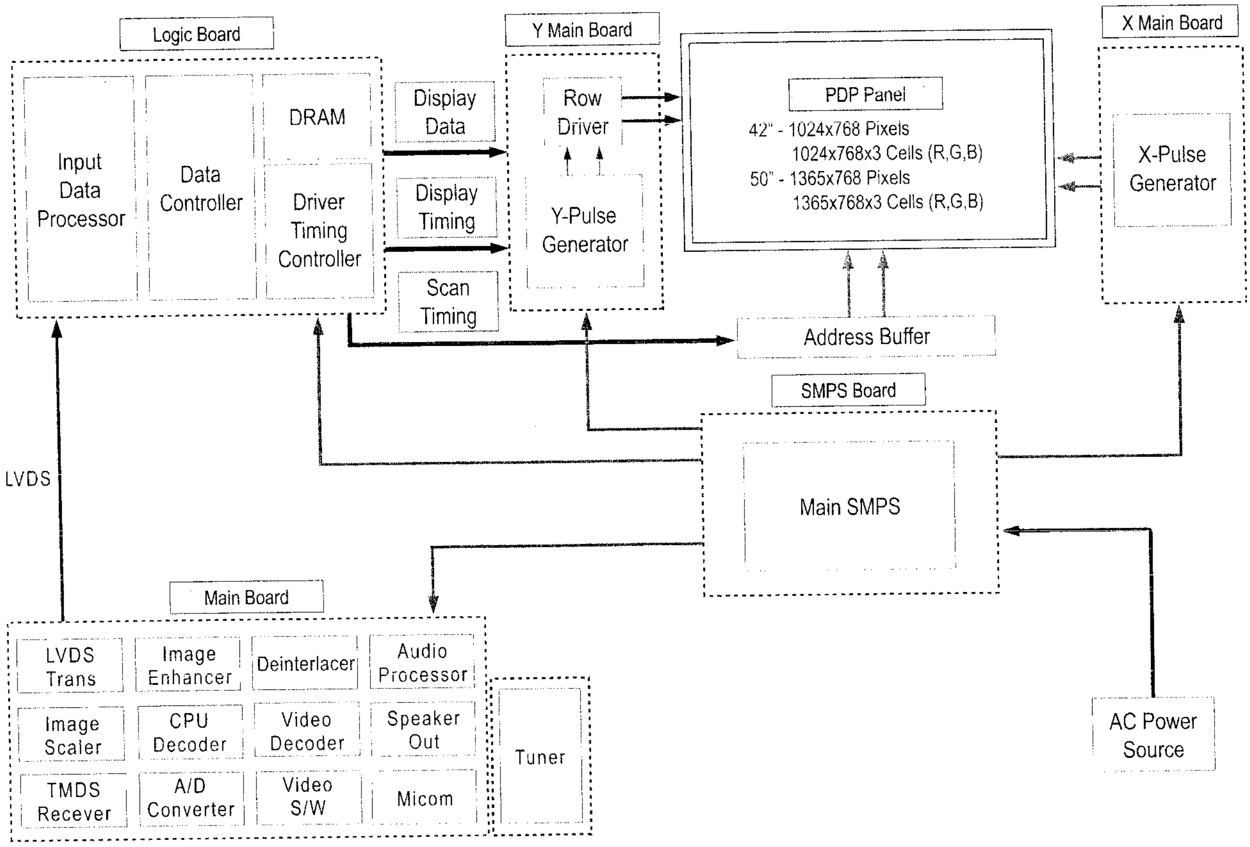
42" Loc. No.	50" Loc. No.	Description
CN5401	CN5401	Module and Y-Main Scan Connect
CN5402	CN5402	Module and Y-Main Scan Connect
CN5403	CN5403	Module and Y-Main Scan Connect
-	CN5412	Y-Main Scan(High) and Y-Main Scan(Low) Connect
CN5501	CN5501	Module and Y-Main Scan Connect
CN5502	CN5502	Module and Y-Main Scan Connect
CN5503	CN5503	Module and Y-Main Scan Connect
CN5407	CN5407	Y-Drive and Y-Main Scan Connect
CN5408	CN5408	Y-Drive and Y-Main Scan Connect
CN5409	CN5409	Y-Drive and Y-Main Scan Connect
CN5412	CN5412	Y-Drive and Y-Main Scan Connect
CN5707	CN5707	Y-Drive and SMPS Connect
CN5701	CN5701	Y-Drive and Logic Board Connect
CN810	CN810	Y-Drive and SMPS Connect
CN809	CN809	X-Drive and SMPS Connect
CN808	CN808	SMPS and F-Buffer Connect
CN807	CN807	SMPS and Logic Board Connect
CN801	CN801	SMPS and Main Board Connect
CN800	CN800	SMPS and AC-Inlet Connect
CN4701	CN4701	SMPS and X-Drive Connect
CN4004	CN4004	Logic Board and X-Drive Connect
CN4002	CN4002	Module and X-Drive Connect
CN4001	CN4001	Module and X-Drive Connect
-	CN4000	Module and X-Drive Connect
CN2000	CN2000	SMPS and Logic Board Connect
CN2001	CN2001	Main Board and Logic Board Connect
CN2002	CN2002	Y-Drive and Logic Board Connect
CN2004	CN2004	Logic Board and F-Buffer Connect
CN2028	CN2028	Logic Board and E-Buffer Connect
CN2500	CN2500	Logic Board and E-Buffer Connect
CN2510	CN2510	E-Buffer and F-Buffer Connect
CN2610	CN2610	E-Buffer and F-Buffer Connect
CN2600	CN2600	Logic Board and F-Buffer Connect
CN2609	CN2609	SMPS and F-Buffer Connect
CN1101	CN1101	SMPS and Main Board Connect
CN2202	CN2202	Main Board and Logic Board Connect
CN1605	CN1605	Function Assy and Main Board Connect
CN1404	CN1404	Side AV Assy and Main Board Connect

42" Loc. No.	50" Loc. No.	Description
CN1606	CN1606	Power SW Assy and Main Board Connect
CN1203	CN1203	Speaker and Main Board Connect
CN101	CN101	Side AV Assy and Main Board Connect
CN1	CN1	Function Assy and Main Board Connect
CN3	CN3	Power SW Assy and Main Board Connect

MEMO

7. Schematic Diagram

7-1 Circuit Description


Logic Board
Input Data Processor
Data Controller
DRAM
Driver Timing Controller
Display Data
Display Timing
Scan Timing
Y Main Board
Row Driver
Y-Pulse Generator
PDP Panel
42" - 1024x768 Pixels
1024x768x3 Cells (R,G,B)
50" - 1365x768 Pixels
1365x768x3 Cells (R,G,B)
X Main Board
X-Pulse Generator
Address Buffer
SMPS Board
Main SMPS
LVDS
Main Board
LVDS Trans
Image Enhancer
Deinterlacer
Audio Processor
Image Scaler
CPU Decoder
Video Decoder
Speaker Out
TMDS Recever
A/D Converter
Video S/W
Micom
Tuner
AC Power Source

■ SMPS Board
The SMPS used for the PDP has been designed to be efficient, compact and lightweight. For VS and VA outputs, a LLC converter has been used. For the other outputs, a Flyback converter has been used.

■ LOGIC Board
The logic circuit consists of a Logic Main Board and an Address Buffer Board. The Logic Main Board decodes the video signal encoded by the Video Board, outputs the ADDRESS data signal for each pattern and generates X and Y drive signals. The Address Buffer Board buffers and transfers the ADDRESS data output signal using TCP IC.

- LVDS with built-in video signal processing (W/L, error diffusion, APC, FCR, etc.) applied and 1 ASIC chip.
- Outputs the address Drive IC control and data signals to the Buffer Board.
- Outputs the control signal for the X and Y Drive Boards.
- Monitors major drive voltages (Micom Circuit Block); detects if a surge voltage has been applied and protects the Drive Circuit.
- Temperature Adaptive Operating Mode (Low Temperature/Room Temperature/High Temperature); Discharge optimization for each temperature level.

■ X-MAIN Board
Connects to the X terminal block, 1) provides maintaining voltage waveform (including ERC), and 2) maintains the Ve bias in the Scan section.

■ Y-MAIN Board
Connects to the Y terminal block, 1) provides maintaining voltage waveform (including ERC), 2) provides Y Rising, Falling Ramp waveforms, and 3) maintains the Vscan bias.

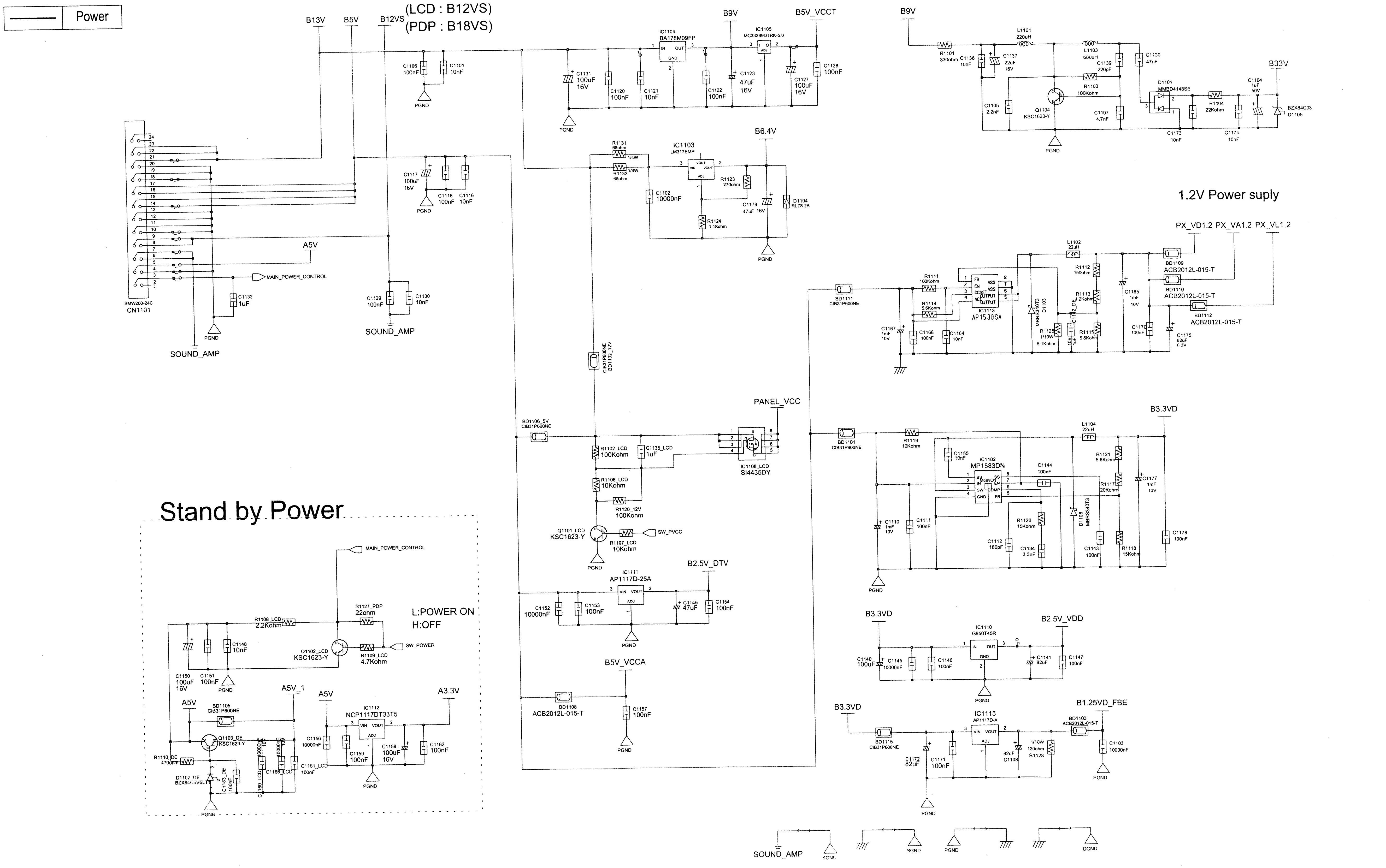
■ Address Buffer Board
It delivers the data signal and control signal to the TCP.

MEMO

7-2 Schematic Diagram

7-2-1 Power

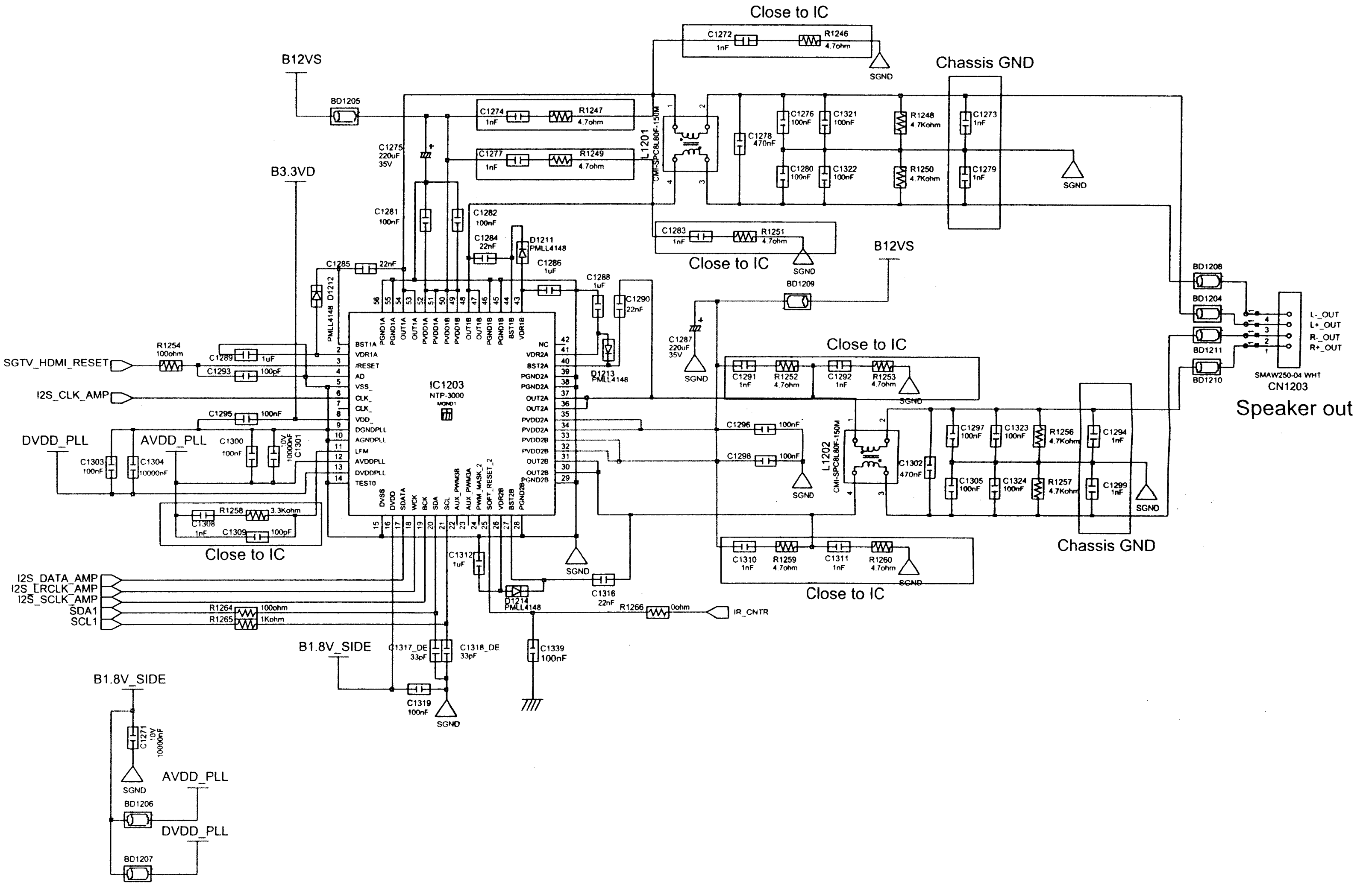
This Document can not be used without Samsung's authorization.


Power
B13V
B5V
B12VS
(LCD : B12VS)
(PDP : B18VS)
B9V
B5V_VCCT
IC1104
BA178M09FP
IC1105
MC33269DTRK-5.0
C1106 100nF
C1101 10nF
C1131 100uF 16V
C1120 100nF
C1121 10nF
C1122 100nF
C1123 47uF 16V
C1127 100uF 16V
C1128 100nF
PGND
SMW200-24C
CN1101
C1132 1uF
SOUND_AMP
A5V
MAIN_POWER_CONTROL
C1117 100uF 16V
C1118 100nF
C1116 10nF
C1129 100nF
C1130 10nF
B6.4V
IC1103
LM317EMP
R1131 68ohm
R1132 68ohm
1/4W
C1102 10000nF
R1123 270ohm
R1124 1.1Kohm
C1179 47uF 16V
D1104 RLZ8.2B
CIB31P600NE
BD1102_12V
BD1106_5V
PANEL_VCC
R1102_LCD 100Kohm
C1135_LCD 1uF
IC1108_LCD
SI4435DY
R1106_LCD 10Kohm
R1120_12V 100Kohm
Q1101_LCD
KSC1623-Y
R1107_LCD 10Kohm
SW_PVCC
B2.5V_DTV
IC1111
AP1117D-25A
C1152 10000nF
C1153 100nF
C1149 47uF
C1154 100nF
B5V_VCCA
BD1108
ACB2012L-015-T
C1157 100nF
Stand by Power
MAIN_POWER_CONTROL
R1127_PDP 220hm
L:POWER ON
H:OFF
R1108_LCD 2.2Kohm
C1148 10nF
Q1102_LCD
KSC1623-Y
R1109_LCD 4.7Kohm
SW_POWER
C1150 100uF 16V
C1151 100nF
A5V_1
A5V
A3.3V
BD1105
CIB31P600NE
IC1112
NCP1117DT33T5
Q1103_DE
KSC1623-Y
R1110_DE 470ohm
D1107_DE BZX84C5V6LT
C1163_DE 100nF
C1160_LCD
C1166_LCD
C1161_LCD 100nF
C1156 10000nF
C1159 100nF
C1158 100uF 16V
C1162 100nF
B9V
R1101 330ohm
C1136 10nF
C1137 22uF 16V
L1101 220uH
L1103 680uH
C1139 220nF
C1130 47nF
B33V
R1103 100Kohm
C1105 2.2nF
Q1104 KSC1623-Y
C1107 4.7nF
D1101 MMBD4148SE
R1104 22Kohm
C1104 1uF 50V
BZX84C33 D1105
C1173 10nF
C1174 10nF
1.2V Power suply
PX_VD1.2
PX_VA1.2
PX_VL1.2
L1102 22uH
R1112 150ohm
BD1109 ACB2012L-015-T
BD1110 ACB2012L-015-T
BD1112 ACB2012L-015-T
R1111 100Kohm
R1114 5.6Kohm
IC1113 AP1530SA
D1103 MBRS340T3
R1113 2Kohm
C1165 1mF 10V
C1170 100nF
C1175 82uF 6.3V
BD1111 CIB31P600NE
C1167 1mF 10V
C1168 100nF
C1164 10nF
R1125 1/10W 5.1Kohm
C1172_DE
R1115 5.6Kohm
B3.3VD
L1104 22uH
BD1101 CIB31P600NE
R1119 10Kohm
C1155 10nF
IC1102 MP1583DN
C1144 100nF
R1121 5.6Kohm
R1117 20Kohm
C1177 1mF 10V
C1110 1mF 10V
C1111 100nF
R1126 15Kohm
D1106 MBRS340T3
C1112 180pF
C1134 3.3nF
C1143 100nF
R1118 15Kohm
C1178 100nF
B3.3VD
B2.5V_VDD
IC1110 G950T45R
C1140 100uF
C1145 10000nF
C1146 100nF
C1141 82uF
C1147 100nF
B3.3VD
B1.25VD_FBE
IC1115 AP1117D-A
BD1115 CIB31P600NE
C1172 82uF
C1171 100nF
C1108 82uF
R1128 1/10W 120ohm
BD1103 ACB2012L-015-T
C1103 10000nF
SOUND_AMP
SGND
PGND
DGND

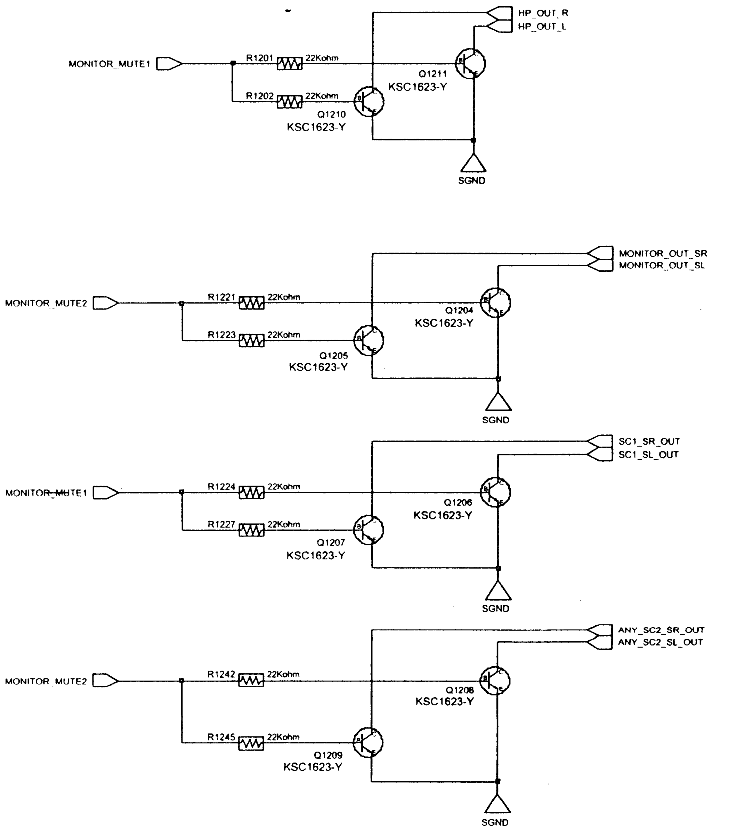
This Document can not be used without Samsung's authorization.

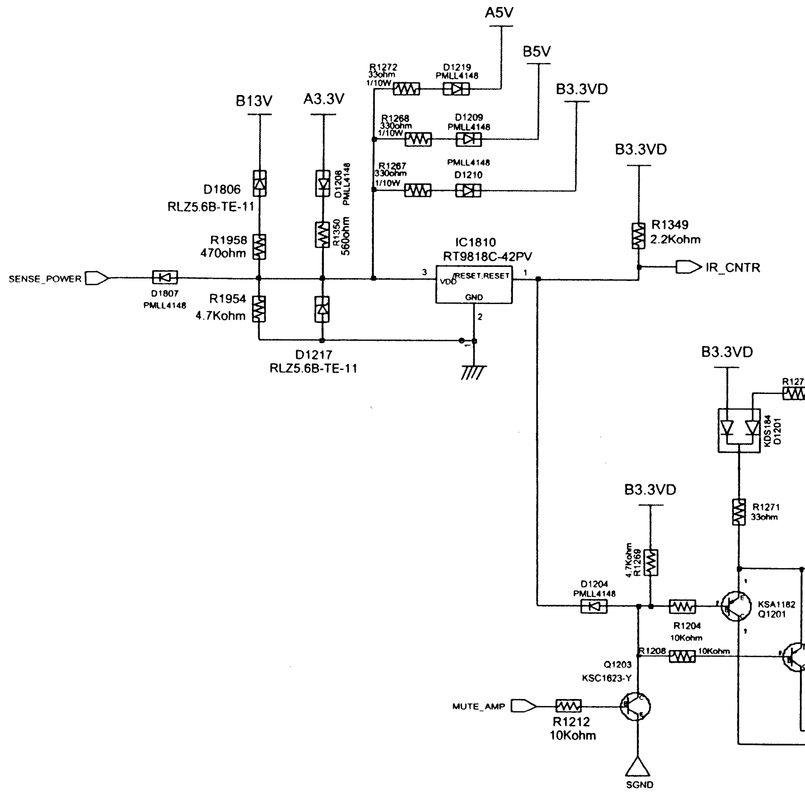
———	Power

SOUND AMP

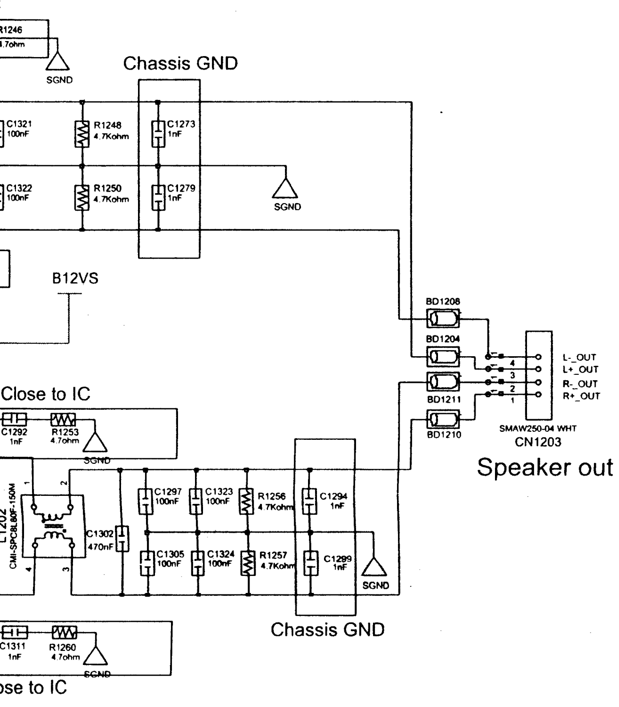

Close to IC
C1272 1nF
R1246 4.7ohm
SGND
Chassis GND
B12VS
BD1205
C1274 1nF
R1247 4.7ohm
C1277 1nF
R1249 4.7ohm
C1275 220uF 35V
B3.3VD
L1201
C1276 100nF
C1321 100nF
C1278 470nF
R1248 4.7Kohm
C1273 1nF
C1280 100nF
C1322 100nF
R1250 4.7Kohm
C1279 1nF
C1281 100nF
C1282 100nF
C1284 22nF
D1211 PMLL4148
C1286 1uF
C1283 1nF
R1251 4.7ohm
Close to IC
B12VS
BD1209
C1285 22nF
D1212 PMLL4148
C1288 1uF
C1290 22nF
C1287 220uF 35V
BD1208
BD1204
BD1211
BD1210
L-_OUT
L+_OUT
R-_OUT
R+_OUT
SMAW250-04 WHT
CN1203
Speaker out
SGTV_HDMI_RESET
R1254 100ohm
C1289 1uF
C1293 100pF
I2S_CLK_AMP
IC1203
NTP-3000
D1213 PMLL4148
Close to IC
C1291 1nF
R1252 4.7ohm
C1292 1nF
R1253 4.7ohm
DVDD_PLL
AVDD_PLL
C1295 100nF
C1300 100nF
C1301 10000nF 10V
C1303 100nF
C1304 10000nF
C1296 100nF
C1298 100nF
L1202
C1297 100nF
C1323 100nF
R1256 4.7Kohm
C1294 1nF
C1302 470nF
C1305 100nF
C1324 100nF
R1257 4.7Kohm
C1299 1nF
SGND
R1258 3.3Kohm
C1306 1nF
C1309 100pF
Close to IC
C1312 1uF
SGND
C1310 1nF
R1259 4.7ohm
C1311 1nF
R1260 4.7ohm
Chassis GND
Close to IC
I2S_DATA_AMP
I2S_LRCLK_AMP
I2S_SCLK_AMP
SDA1
SCL1
R1264 100ohm
R1265 1Kohm
D1214 PMLL4148
C1316 22nF
R1266 0ohm
IR_CNTR
B1.8V_SIDE
C1317_DE 33pF
C1318_DE 33pF
C1339 100nF
C1319 100nF
SGND
B1.8V_SIDE
C1271 10000nF 10V
SGND
AVDD_PLL
BD1206
DVDD_PLL
BD1207

POP NOISE SOLUTION

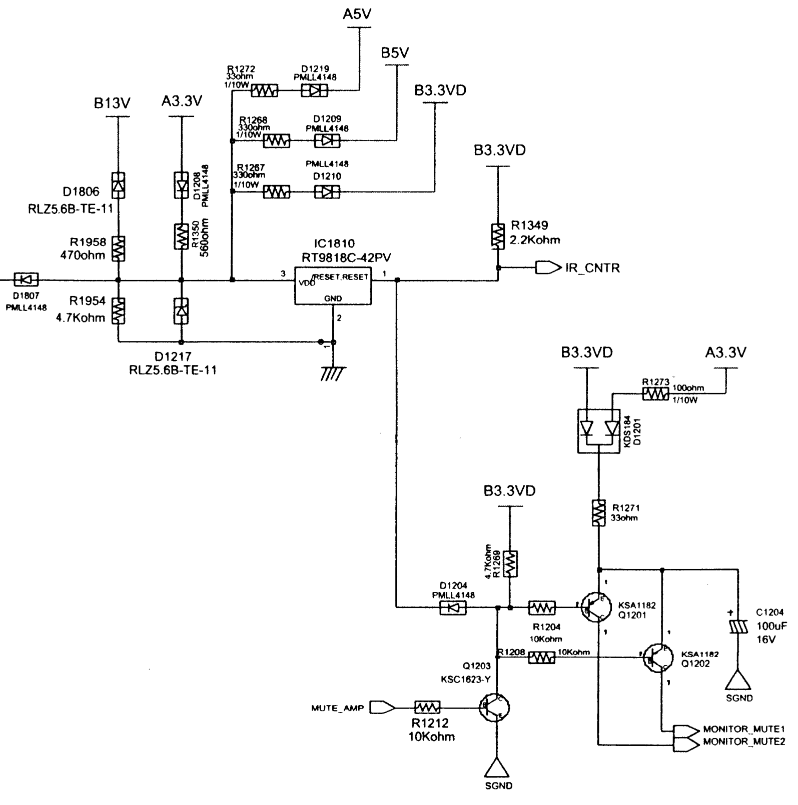

HP_OUT_R
HP_OUT_L
MONITOR_MUTE1
R1201 22Kohm
R1202 22Kohm
Q1211 KSC1623-Y
Q1210 KSC1623-Y
SGND
MONITOR_OUT_SR
MONITOR_OUT_SL
MONITOR_MUTE2
R1221 22Kohm
R1223 22Kohm
Q1204 KSC1623-Y
Q1205 KSC1623-Y
SGND
SC1_SR_OUT
SC1_SL_OUT
MONITOR_MUTE1
R1224 22Kohm
R1227 22Kohm
Q1206 KSC1623-Y
Q1207 KSC1623-Y
SGND
ANY_SC2_SR_OUT
ANY_SC2_SL_OUT
MONITOR_MUTE2
R1242 22Kohm
R1245 22Kohm
Q1208 KSC1623-Y
Q1209 KSC1623-Y
SGND


A5V
B5V
B3.3VD
R1272 33ohm 1/10W
D1219 PMLL4148
B13V
A3.3V
R1268 330ohm 1/10W
D1209 PMLL4148
R1267 330ohm 1/10W
D1210 PMLL4148
B3.3VD
D1806 RLZ5.6B-TE-11
D1208 PMLL4148
R1958 470ohm
R1350 560ohm
R1349 2.2Kohm
IC1810 RT9818C-42PV
VDD RESET RESET
GND
IR_CNTR
SENSE_POWER
D1807 PMLL4148
R1954 4.7Kohm
D1217 RLZ5.6B-TE-11
B3.3VD
R1271 33ohm
B3.3VD
D1204 PMLL4148
R1204 10Kohm
KSA1182 Q1201
R1208 10Kohm
Q1203 KSC1623-Y
MUTE_AMP
R1212 10Kohm
SGND

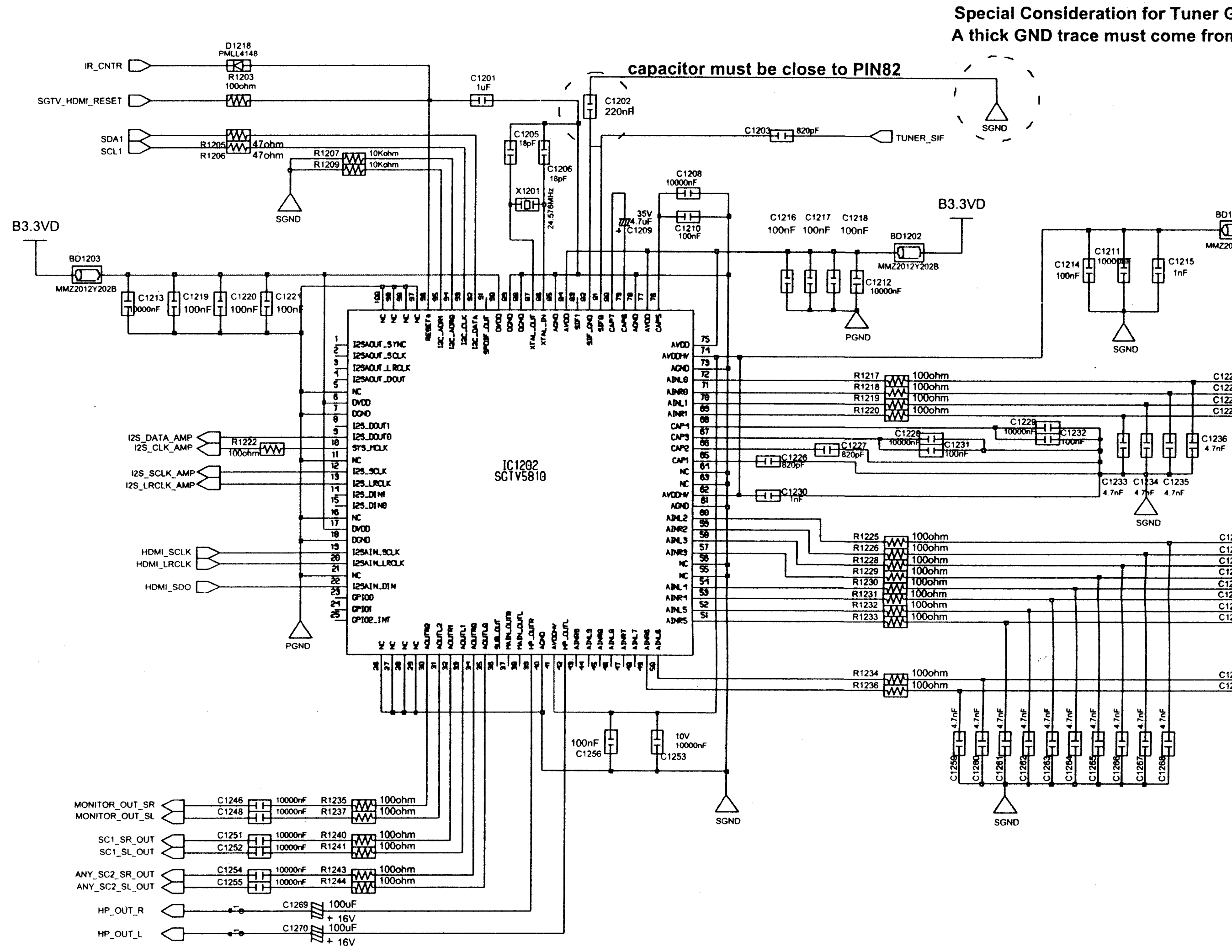
AMP


R1246
SGND
Chassis GND
C1321 100nF
R1248 4.7Kohm
C1273 1nF
C1322 100nF
R1250 4.7Kohm
C1279 1nF
B12VS
BD1208
BD1204
BD1211
BD1210
L-_OUT
L+_OUT
R-_OUT
R+_OUT
SMAW250-04 WHT
CN1203
Speaker out
Close to IC
C1292 1nF
R1253 4.7ohm
C1297 100nF
C1323 100nF
R1256 4.7Kohm
C1294 1nF
C1302 470nF
C1305 100nF
C1324 100nF
R1257 4.7Kohm
C1299 1nF
Chassis GND
C1311 1nF
R1260 4.7ohm
ose to IC

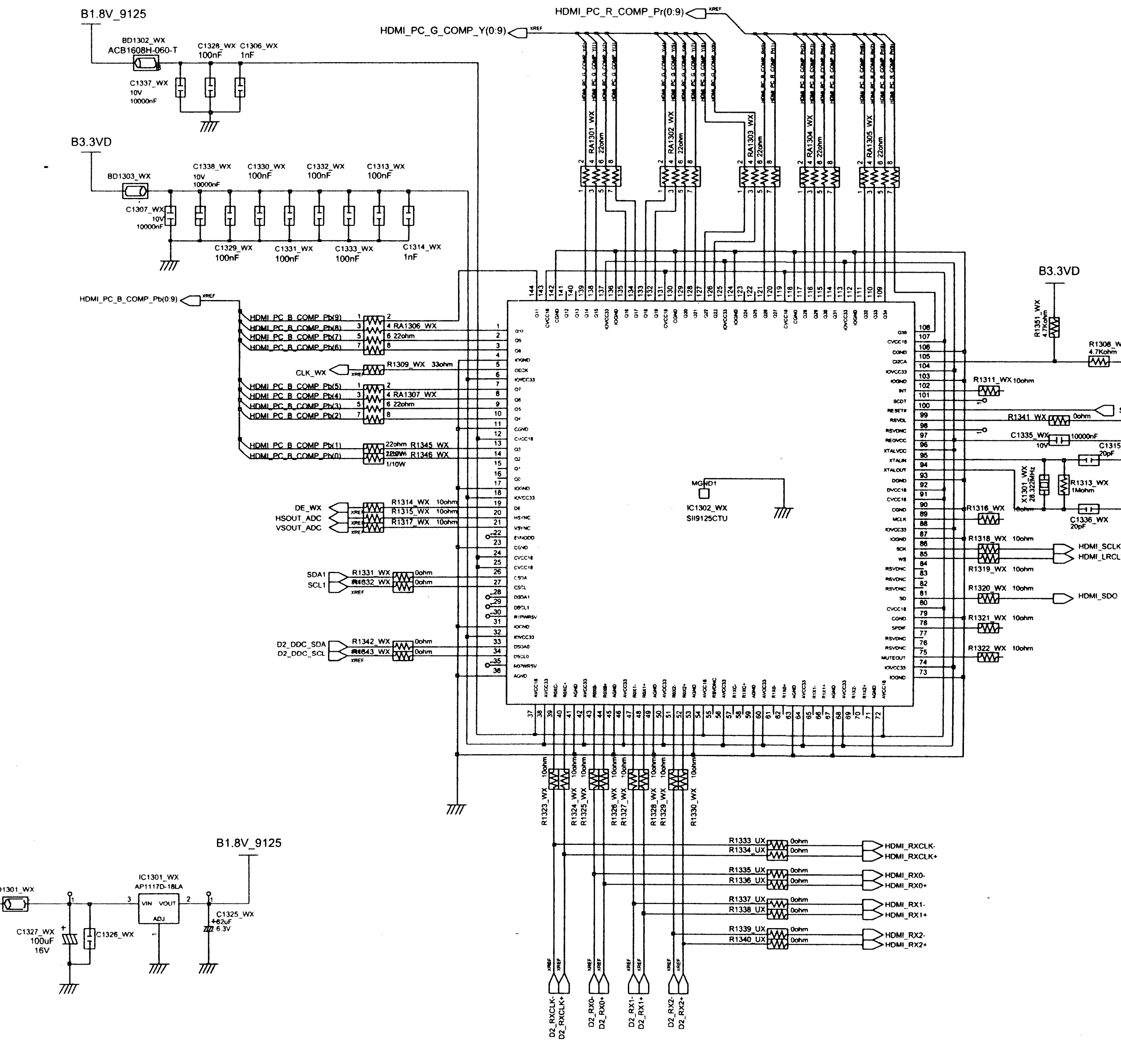
OLUTION


A5V
B5V
B3.3VD
B13V
A3.3V
R1272 33ohm 1/10W
D1219 PMLL4148
R1268 330ohm 1/10W
D1209 PMLL4148
R1267 330ohm 1/10W
D1210 PMLL4148
D1806 RLZ5.6B-TE-11
R1958 470ohm
R1954 4.7Kohm
D1807 PMLL4148
D1217 RLZ5.6B-TE-11
R1206 560ohm
IC1810 RT9818C-42PV
RESET
VDD
GND
R1349 2.2Kohm
IR_CNTR
B3.3VD
A3.3V
R1273 100ohm 1/10W
KDS184 Q1201
R1271 33ohm
B3.3VD
R1269 4.7Kohm
D1204 PMLL4148
R1204 10Kohm
KSA1182 Q1201
C1204 100uF 16V
R1208 10Kohm
KSA1182 Q1202
Q1203 KSC1623-Y
MUTE_AMP
R1212 10Kohm
MONITOR_MUTE1
MONITOR_MUTE2
SGND

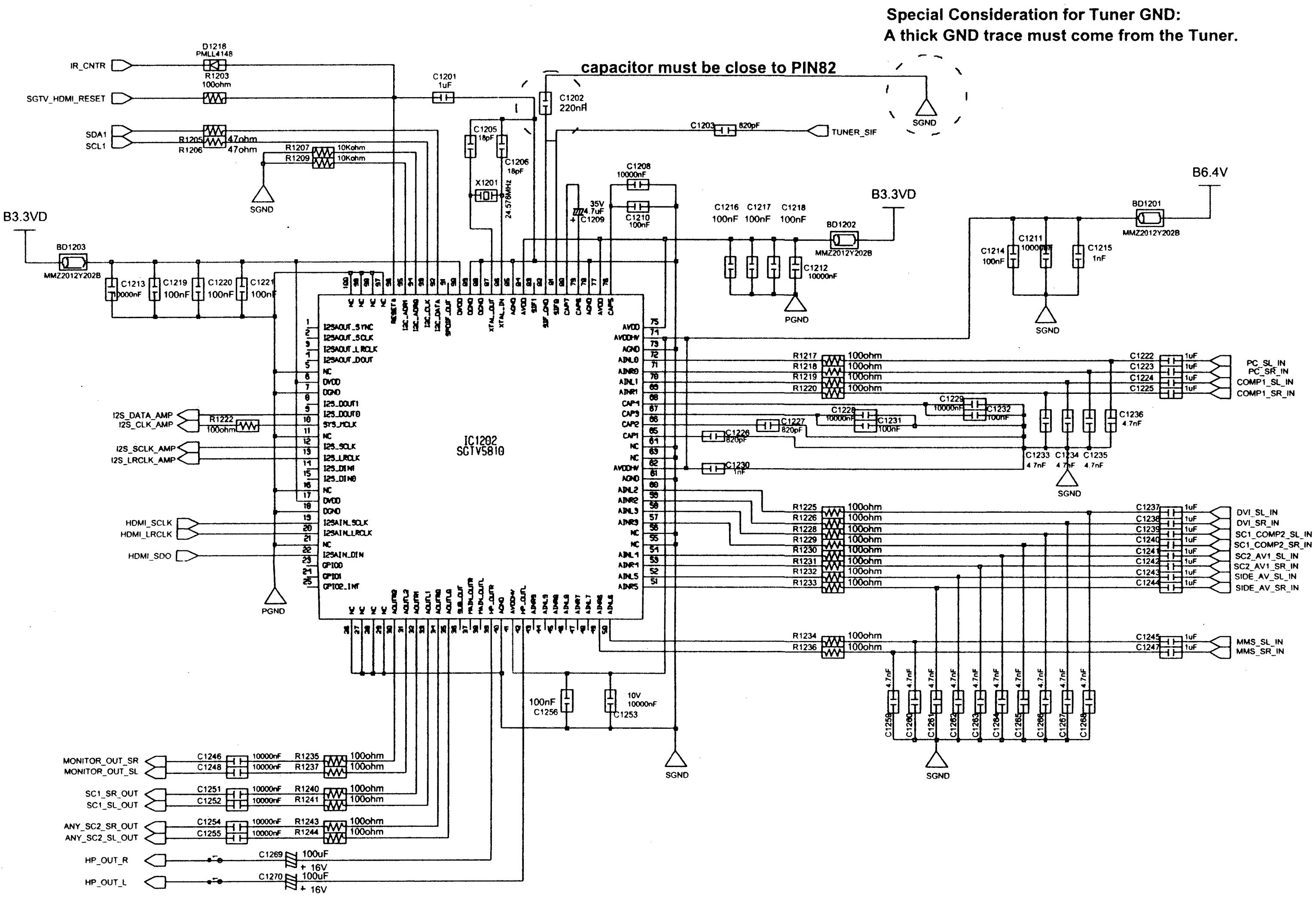
SOUND


Special Consideration for Tuner G
A thick GND trace must come fron
capacitor must be close to PIN82
IR_CNTR
D1218 PMLL4148
SGTV_HDMI_RESET
R1203 100ohm
SDA1
SCL1
R1205 47ohm
R1206 47ohm
R1207 10Kohm
R1209 10Kohm
C1201 1uF
C1202 220nF
C1205 18pF
C1206 18pF
X1201 24.576MHz
C1203 820pF
TUNER_SIF
C1208 10000nF
C1209 35V 4.7uF
C1210 100nF
B3.3VD
BD1203 MMZ2012Y202B
C1213 10000nF
C1219 100nF
C1220 100nF
C1221 100nF
C1216 100nF
C1217 100nF
C1218 100nF
BD1202 MMZ2012Y202B
C1212 10000nF
B3.3VD
C1214 100nF
C1211 10000nF
C1215 1nF
PGND
SGND
IC1202 SGTV5810
I2S_DATA_AMP
I2S_CLK_AMP
R1222 100ohm
I2S_SCLK_AMP
I2S_LRCLK_AMP
HDMI_SCLK
HDMI_LRCLK
HDMI_SDO
R1217 100ohm
R1218 100ohm
R1219 100ohm
R1220 100ohm
C1229 10000nF
C1232 100nF
C1228 10000nF
C1231 100nF
C1226 820pF
C1227 820pF
C1230 1nF
C1233 4.7nF
C1234 4.7nF
C1235 4.7nF
C1236 4.7nF
R1225 100ohm
R1226 100ohm
R1228 100ohm
R1229 100ohm
R1230 100ohm
R1231 100ohm
R1232 100ohm
R1233 100ohm
R1234 100ohm
R1236 100ohm
C1256 100nF
C1253 10V 10000nF
MONITOR_OUT_SR
MONITOR_OUT_SL
C1246 10000nF
C1248 10000nF
R1235 100ohm
R1237 100ohm
SC1_SR_OUT
SC1_SL_OUT
C1251 10000nF
C1252 10000nF
R1240 100ohm
R1241 100ohm
ANY_SC2_SR_OUT
ANY_SC2_SL_OUT
C1254 10000nF
C1255 10000nF
R1243 100ohm
R1244 100ohm
HP_OUT_R
C1269 100uF 16V
HP_OUT_L
C1270 100uF 16V
SGND

HDMI RECEIVER


B1.8V_9125
BD1302_WX ACB1608H-060-T
C1328_WX 100nF
C1306_WX 1nF
C1337_WX 10V 10000nF
HDMI_PC_G_COMP_Y(0:9)
HDMI_PC_R_COMP_Pr(0:9)
B3.3VD
BD1303_WX
C1338_WX 10V 10000nF
C1330_WX 100nF
C1332_WX 100nF
C1313_WX 100nF
C1307_WX 10V 10000nF
C1329_WX 100nF
C1331_WX 100nF
C1333_WX 100nF
C1314_WX 1nF
RA1301_WX 22ohm
RA1302_WX 22ohm
RA1303_WX 22ohm
RA1304_WX 22ohm
RA1305_WX 22ohm
HDMI_PC_B_COMP_Pb(0:9)
RA1306_WX 22ohm
R1309_WX 33ohm
CLK_WX
RA1307_WX 22ohm
R1345_WX 22ohm
R1346_WX 1/10W
DE_WX
HSOUT_ADC
VSOUT_ADC
R1314_WX 10ohm
R1315_WX 10ohm
R1317_WX 10ohm
SDA1
SCL1
R1331_WX 0ohm
R1332_WX 0ohm
D2_DDC_SDA
D2_DDC_SCL
R1342_WX 0ohm
R1343_WX 0ohm
MGND1
IC1302_WX SII9125CTU
B3.3VD
R1351_WX
R1308_WX 4.7Kohm
R1311_WX 10ohm
R1341_WX 0ohm
C1335_WX 10V 10000nF
C1315
X1301_WX 28.322MHz
R1313_WX 1Mohm
C1336_WX 20pF
R1316_WX
R1318_WX 10ohm
HDMI_SCLK
HDMI_LRCL
R1319_WX 10ohm
R1320_WX 10ohm
HDMI_SDO
R1321_WX 10ohm
R1322_WX 10ohm
R1323_WX
R1324_WX
R1325_WX
R1326_WX
R1327_WX
R1328_WX
R1329_WX
R1330_WX
R1333_UX 0ohm
R1334_UX 0ohm
HDMI_RXCLK-
HDMI_RXCLK+
R1335_UX 0ohm
R1336_UX 0ohm
HDMI_RX0-
HDMI_RX0+
R1337_UX 0ohm
R1338_UX 0ohm
HDMI_RX1-
HDMI_RX1+
R1339_UX 0ohm
R1340_UX 0ohm
HDMI_RX2-
HDMI_RX2+
D2_RXCLK-
D2_RXCLK+
D2_RX0-
D2_RX0+
D2_RX1-
D2_RX1+
D2_RX2-
D2_RX2+
B3.3VD
B1.8V_9125
BD1301_WX
IC1301_WX AP1117D-18LA
VIN
VOUT
ADJ
C1327_WX 100uF 16V
C1326_WX
C1325_WX 22uF 6.3V

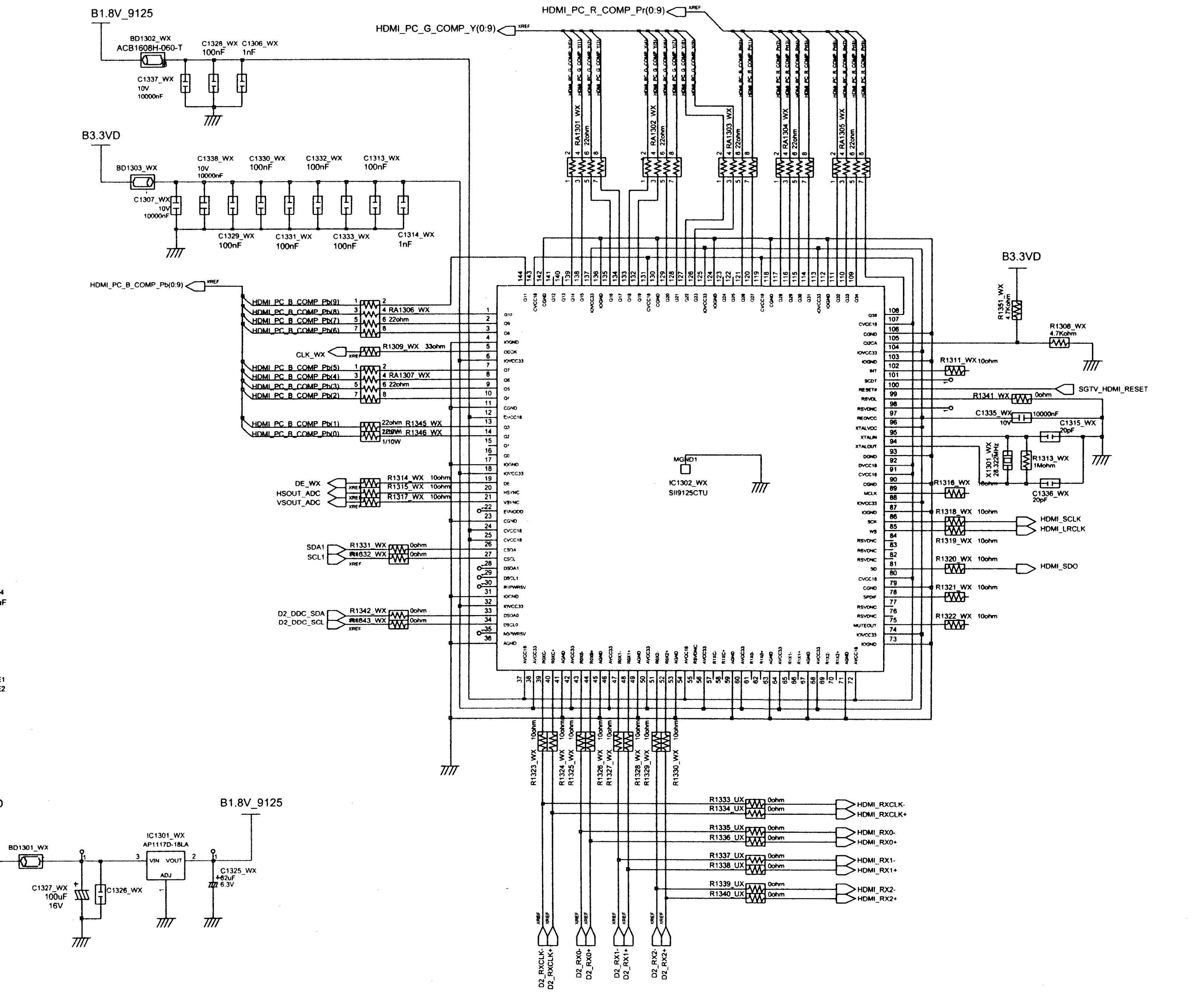
SOUND


Special Consideration for Tuner GND:
A thick GND trace must come from the Tuner.

capacitor must be close to PIN82

IR_CNTR
SGTV_HDMI_RESET
SDA1
SCL1
D1218
PMLL4148
R1203
100ohm
R1205 47ohm
R1206 47ohm
R1207 10Kohm
R1209 10Kohm
C1201
1uF
C1202
220nF
C1203 820pF
TUNER_SIF
SGND
C1205 18pF
C1206 18pF
X1201
24.576MHz
C1208 10000nF
35V 4.7uF C1209
C1210 100nF
C1216 C1217 C1218
100nF 100nF 100nF
B3.3VD
BD1202
MMZ2012Y202B
C1212 10000nF
PGND
B6.4V
BD1201
MMZ2012Y202B
C1211 10000nF
C1214 100nF
C1215 1nF
BD1203
MMZ2012Y202B
C1213 C1219 C1220 C1221
100nF 100nF 100nF
I2S_DATA_AMP
I2S_CLK_AMP
R1222 100ohm
I2S_SCLK_AMP
I2S_LRCLK_AMP
HDMI_SCLK
HDMI_LRCLK
HDMI_SDO
IC1202
SCTV5810
R1217 100ohm
R1218 100ohm
R1219 100ohm
R1220 100ohm
C1222 1uF
C1223 1uF
C1224 1uF
C1225 1uF
PC_SL_IN
PC_SR_IN
COMP1_SL_IN
COMP1_SR_IN
C1229 10000nF
C1232 100nF
C1228 10000nF
C1231 100nF
C1226 820pF
C1227 820pF
C1230 1nF
C1236 4.7nF
C1233 C1234 C1235
4.7nF 4.7nF 4.7nF
R1225 100ohm
R1226 100ohm
R1228 100ohm
R1229 100ohm
R1230 100ohm
R1231 100ohm
R1232 100ohm
R1233 100ohm
C1237 1uF
C1238 1uF
C1239 1uF
C1240 1uF
C1241 1uF
C1242 1uF
C1243 1uF
C1244 1uF
DVI_SL_IN
DVI_SR_IN
SC1_COMP2_SL_IN
SC1_COMP2_SR_IN
SC2_AV1_SL_IN
SC2_AV1_SR_IN
SIDE_AV_SL_IN
SIDE_AV_SR_IN
R1234 100ohm
R1236 100ohm
C1245 1uF
C1247 1uF
MMS_SL_IN
MMS_SR_IN
100nF C1256
10V 10000nF C1253
MONITOR_OUT_SR
MONITOR_OUT_SL
C1246 C1248 10000nF
R1235 R1237 100ohm
SC1_SR_OUT
SC1_SL_OUT
C1251 C1252 10000nF
R1240 R1241 100ohm
ANY_SC2_SR_OUT
ANY_SC2_SL_OUT
C1254 C1255 10000nF
R1243 R1244 100ohm
HP_OUT_R
HP_OUT_L
C1269 100uF 16V
C1270 100uF 16V

HDMI RECEIVER

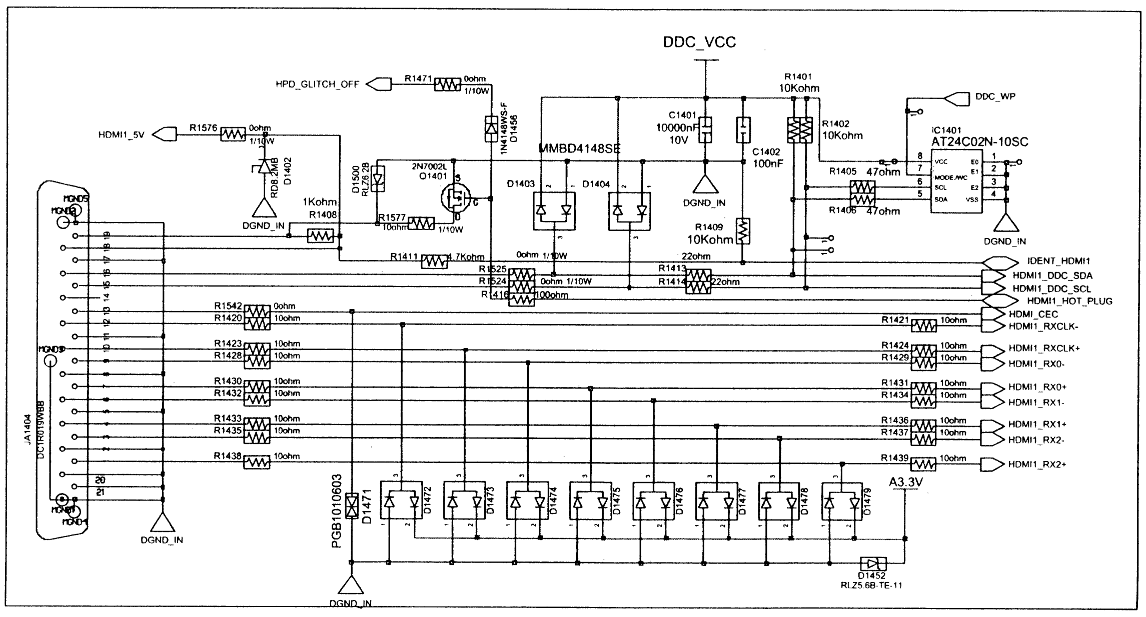

B1.8V_9125
BD1302_WX
ACB1608H-060-T
C1328_WX C1306_WX
100nF 1nF
C1337_WX
10V
10000nF
HDMI_PC_R_COMP_Pr(0:9)
HDMI_PC_G_COMP_Y(0:9)
RA1301_WX
RA1302_WX
RA1303_WX
RA1304_WX
RA1305_WX
22ohm
B3.3VD
BD1303_WX
C1338_WX C1330_WX C1332_WX C1313_WX
10V 10000nF 100nF 100nF 100nF
C1307_WX
10V 10000nF
C1329_WX C1331_WX C1333_WX C1314_WX
100nF 100nF 100nF 1nF
HDMI_PC_B_COMP_Pb(0:9)
HDMI_PC_B_COMP_Pb(9)
HDMI_PC_B_COMP_Pb(8)
HDMI_PC_B_COMP_Pb(7)
HDMI_PC_B_COMP_Pb(6)
RA1306_WX
22ohm
CLK_WX
R1309_WX 33ohm
HDMI_PC_B_COMP_Pb(5)
HDMI_PC_B_COMP_Pb(4)
HDMI_PC_B_COMP_Pb(3)
HDMI_PC_B_COMP_Pb(2)
RA1307_WX
22ohm
HDMI_PC_B_COMP_Pb(1)
HDMI_PC_B_COMP_Pb(0)
22ohm R1345_WX
22ohm R1346_WX
1/10W
DE_WX
HSOUT_ADC
VSOUT_ADC
R1314_WX 100hm
R1315_WX 100hm
R1317_WX 100hm
SDA1
SCL1
R1331_WX 0ohm
R1332_WX 0ohm
D2_DDC_SDA
D2_DDC_SCL
R1342_WX 0ohm
R1343_WX 0ohm
MGND1
IC1302_WX
SII9125CTU
B3.3VD
R1351_WX
4.7Kohm
R1308_WX
4.7Kohm
R1311_WX 10ohm
SGTV_HDMI_RESET
R1341_WX 0ohm
C1335_WX 10V 10000nF
C1315_WX 20pF
X1301_WX
28.322MHz
R1313_WX 1Mohm
C1336_WX 20pF
R1316_WX 10ohm
R1318_WX 10ohm
R1319_WX 10ohm
HDMI_SCLK
HDMI_LRCLK
R1320_WX 10ohm
HDMI_SDO
R1321_WX 10ohm
R1322_WX 10ohm
R1323_WX
R1324_WX
R1325_WX
R1326_WX
R1327_WX
R1328_WX
R1329_WX
R1330_WX
10ohm
R1333_UX 0ohm
R1334_UX 0ohm
HDMI_RXCLK-
HDMI_RXCLK+
R1335_UX 0ohm
R1336_UX 0ohm
HDMI_RX0-
HDMI_RX0+
R1337_UX 0ohm
R1338_UX 0ohm
HDMI_RX1-
HDMI_RX1+
R1339_UX 0ohm
R1340_UX 0ohm
HDMI_RX2-
HDMI_RX2+
D2_RXCLK-
D2_RXCLK+
D2_RX0-
D2_RX0+
D2_RX1-
D2_RX1+
D2_RX2-
D2_RX2+
B1.8V_9125
BD1301_WX
IC1301_WX
AP1117D-18LA
VIN VOUT
ADJ
C1327_WX
100uF
16V
C1326_WX
C1325_WX
4.7uF
6.3V

7-2-3 Input & Output Jack I (Normal)

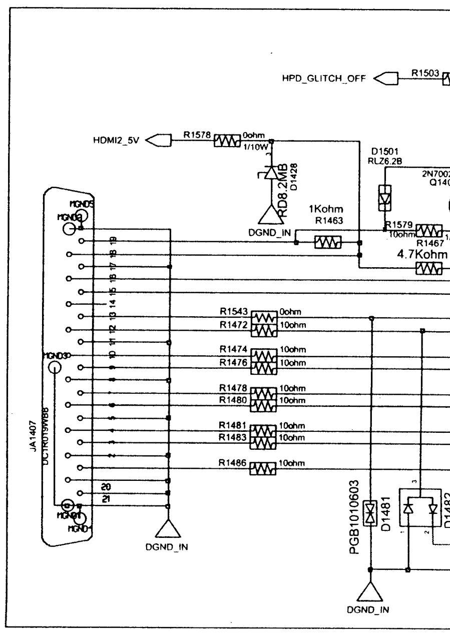
This Document can not be used without Samsung's authorization.

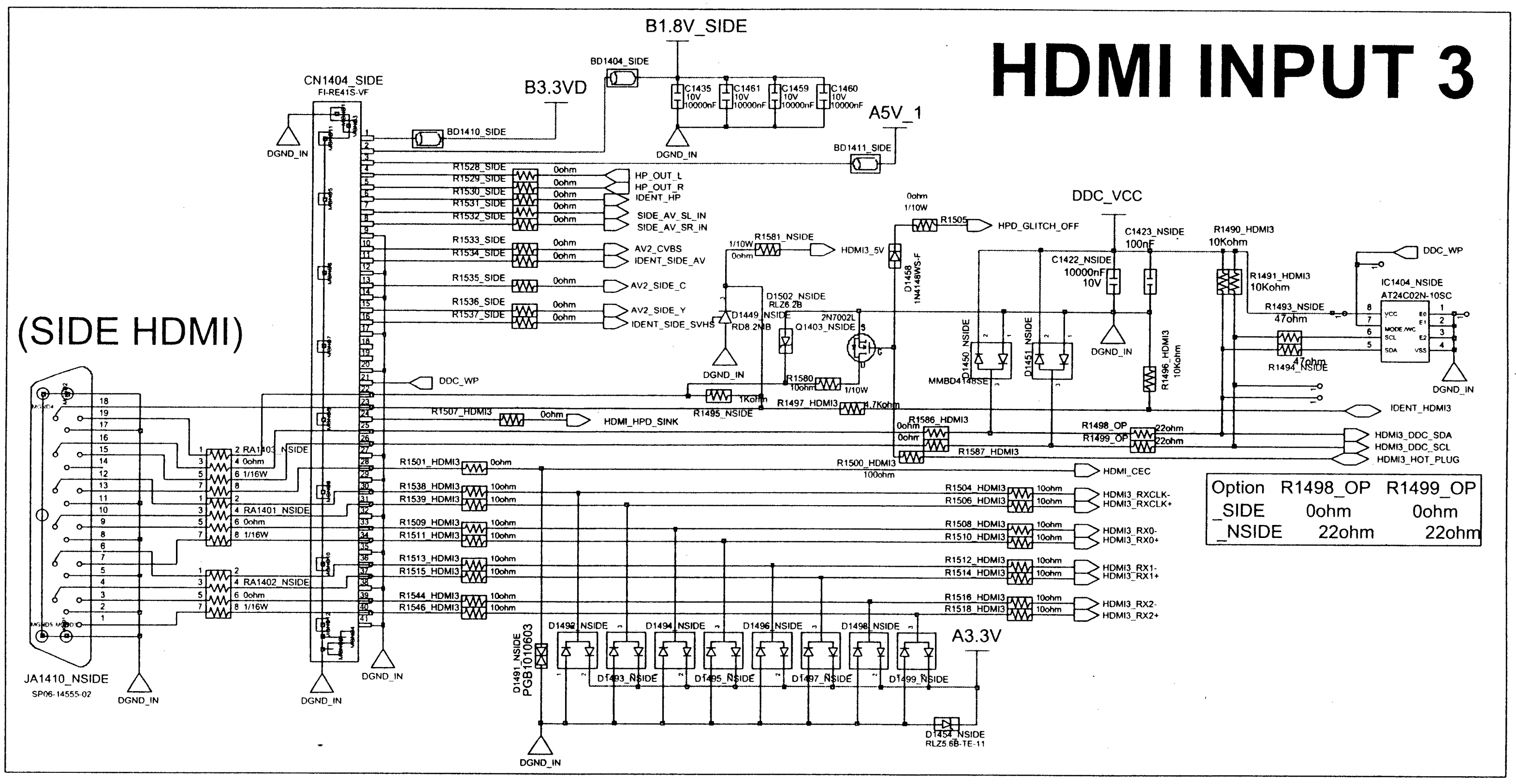
———	Power

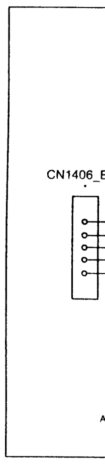
HDMI INPUT 1

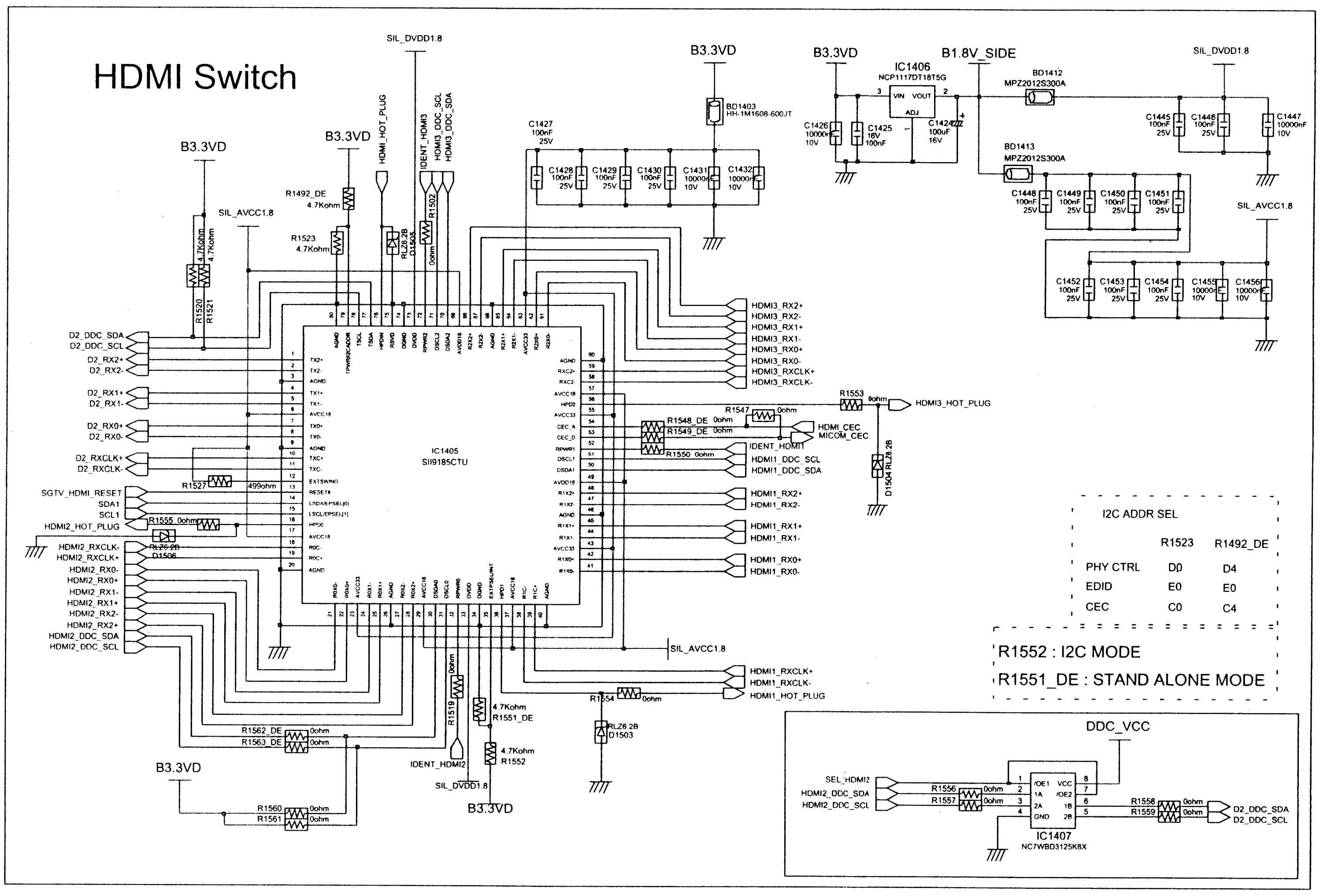

DDC_VCC
HPD_GLITCH_OFF
HDMI1_5V
R1576
R1471
D1402
RD8.2MB
1Kohm
R1408
D1500
2N7002L
Q1401
R1577
MMBD4148SE
D1403
D1404
C1401
10000nF
10V
C1402
100nF
R1401
10Kohm
R1402
10Kohm
DDC_WP
IC1401
AT24C02N-10SC
R1405 47ohm
R1406 47ohm
R1409
10Kohm
DGND_IN
R1411
4.7Kohm
R1413
R1414
22ohm
IDENT_HDMI1
HDMI1_DDC_SDA
HDMI1_DDC_SCL
HDMI1_HOT_PLUG
HDMI_CEC
HDMI1_RXCLK-
HDMI1_RXCLK+
HDMI1_RX0-
HDMI1_RX0+
HDMI1_RX1-
HDMI1_RX1+
HDMI1_RX2-
HDMI1_RX2+
R1542
R1420
R1423
R1428
R1430
R1432
R1433
R1435
R1438
R1421
R1424
R1429
R1431
R1434
R1436
R1437
R1439
JA1404
PGB1010603
D1471
D1472
D1473
D1474
D1475
D1476
D1477
D1478
D1479
A3.3V
D1452
RLZ5.6B-TE-11
DGND_IN

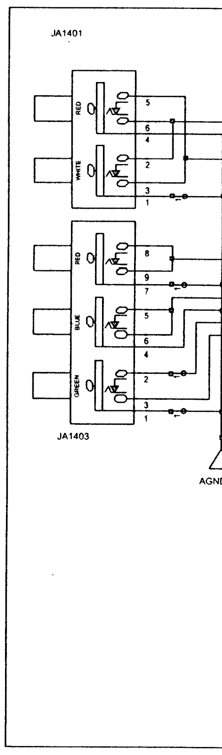
HDMI INPUT

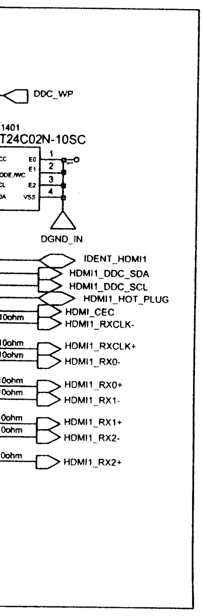

HPD_GLITCH_OFF
R1503
HDMI2_5V
R1578
D1501
RLZ6.2B
1Kohm
R1463
R1579
R1467
4.7Kohm
R1543
R1472
R1474
R1476
R1478
R1480
R1481
R1483
R1486
JA1407
PGB1010603
D1481
DGND_IN


B1.8V_SIDE
HDMI INPUT 3
(SIDE HDMI)
CN1404_SIDE
FI-RE41S-VF
B3.3VD
BD1404_SIDE
C1435
C1451
C1459
C1460
A5V_1
BD1410_SIDE
BD1411_SIDE
DGND_IN
HP_OUT_L
HP_OUT_R
IDENT_HP
SIDE_AV_SL_IN
SIDE_AV_SR_IN
AV2_CVBS
IDENT_SIDE_AV
AV2_SIDE_C
AV2_SIDE_Y
IDENT_SIDE_SVHS
DDC_VCC
HPD_GLITCH_OFF
R1505
R1581_NSIDE
HDMI3_5V
D1502_NSIDE
2N7002L
Q1403_NSIDE
C1423_NSIDE
C1422_NSIDE
10000nF
10V
R1490_HDMI3
10Kohm
R1491_HDMI3
10Kohm
R1493_NSIDE
47ohm
R1494_NSIDE
IC1404_NSIDE
AT24C02N-10SC
DDC_WP
MMBD4148SE
R1496_HDMI3
10Kohm
DDC_WP
R1507_HDMI3
HDMI_HPD_SINK
R1495_NSIDE
R1497_HDMI3
4.7Kohm
R1580
R1586_HDMI3
R1587_HDMI3
R1498_OP
R1499_OP
22ohm
IDENT_HDMI3
HDMI3_DDC_SDA
HDMI3_DDC_SCL
HDMI3_HOT_PLUG
R1500_HDMI3
HDMI_CEC
R1501_HDMI3
R1538_HDMI3
R1539_HDMI3
R1509_HDMI3
R1511_HDMI3
R1513_HDMI3
R1515_HDMI3
R1544_HDMI3
R1546_HDMI3
R1504_HDMI3
R1506_HDMI3
R1508_HDMI3
R1510_HDMI3
R1512_HDMI3
R1514_HDMI3
R1516_HDMI3
R1518_HDMI3
HDMI3_RXCLK-
HDMI3_RXCLK+
HDMI3_RX0-
HDMI3_RX0+
HDMI3_RX1-
HDMI3_RX1+
HDMI3_RX2-
HDMI3_RX2+
RA1403_NSIDE
RA1401_NSIDE
RA1402_NSIDE
JA1410_NSIDE
SP06-14555-02
D1490_NSIDE
PGB1010603
D1492_NSIDE
D1493_NSIDE
D1494_NSIDE
D1495_NSIDE
D1496_NSIDE
D1497_NSIDE
D1498_NSIDE
D1499_NSIDE
A3.3V
D1454_NSIDE
RLZ5.6B-TE-11
DGND_IN
Option R1498_OP R1499_OP
_SIDE 0ohm 0ohm
_NSIDE 22ohm 22ohm

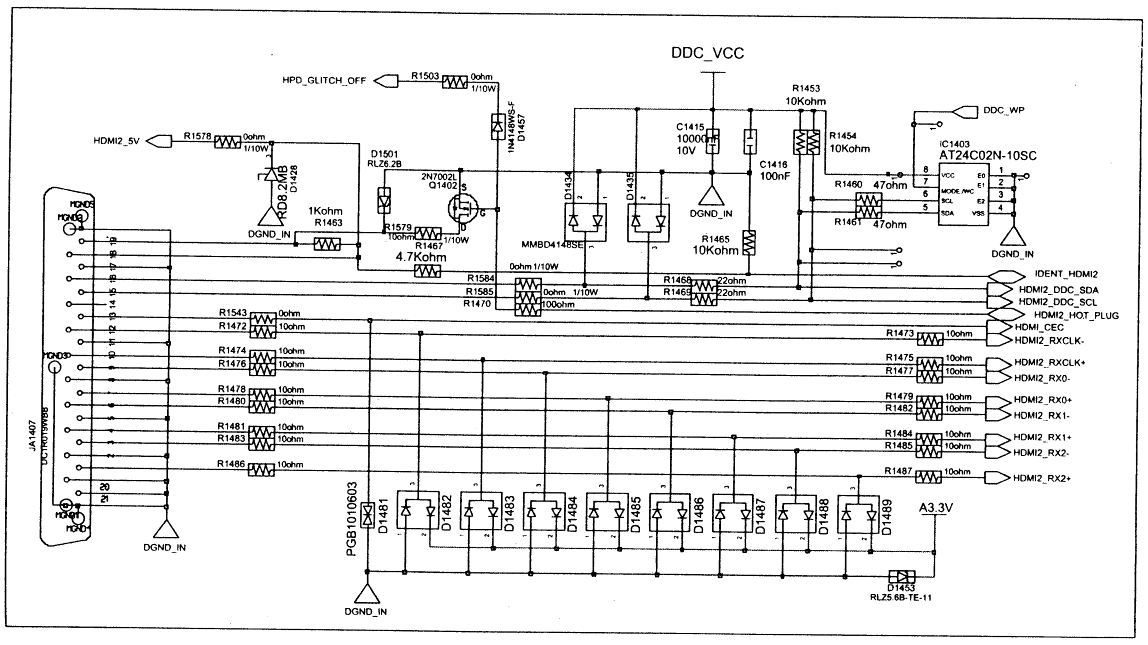



HDMI Switch
SIL_DVDD1.8
B3.3VD
B3.3VD
B1.8V_SIDE
IC1406
NCP1117DT18T5G
BD1412
MPZ2012S300A
BD1413
MPZ2012S300A
SIL_DVDD1.8
BD1403
HH-1M1608-600JT
C1427
100nF
25V
C1428
C1429
C1430
C1431
C1432
C1425
C1424
C1426
C1445
C1446
C1447
C1448
C1449
C1450
C1451
C1452
C1453
C1454
C1455
C1456
SIL_AVCC1.8
B3.3VD
HDMI_HOT_PLUG
IDENT_HDMI3
HDMI3_DDC_SCL
HDMI3_DDC_SDA
R1492_DE
4.7Kohm
R1523
4.7Kohm
R1502
R1520
R1521
D2_DDC_SDA
D2_DDC_SCL
D2_RX2+
D2_RX2-
D2_RX1+
D2_RX1-
D2_RX0+
D2_RX0-
D2_RXCLK+
D2_RXCLK-
SGTV_HDMI_RESET
SDA1
SCL1
HDMI2_HOT_PLUG
R1527
R1555
D1506
HDMI2_RXCLK-
HDMI2_RXCLK+
HDMI2_RX0-
HDMI2_RX0+
HDMI2_RX1-
HDMI2_RX1+
HDMI2_RX2-
HDMI2_RX2+
HDMI2_DDC_SDA
HDMI2_DDC_SCL
IC1405
SII9185CTU
HDMI3_RX2+
HDMI3_RX2-
HDMI3_RX1+
HDMI3_RX1-
HDMI3_RX0+
HDMI3_RX0-
HDMI3_RXCLK+
HDMI3_RXCLK-
R1553
HDMI3_HOT_PLUG
R1547
R1548_DE
R1549_DE
R1550
HDMI CEC
MICOM_CEC
IDENT_HDMI1
HDMI1_DDC_SCL
HDMI1_DDC_SDA
D1504
HDMI1_RX2+
HDMI1_RX2-
HDMI1_RX1+
HDMI1_RX1-
HDMI1_RX0+
HDMI1_RX0-
SIL_AVCC1.8
HDMI1_RXCLK+
HDMI1_RXCLK-
HDMI1_HOT_PLUG
R1554
R1519
R1551_DE
4.7Kohm
R1552
4.7Kohm
D1503
IDENT_HDMI2
SIL_DVDD1.8
B3.3VD
R1562_DE
R1563_DE
R1560
R1561
B3.3VD
I2C ADDR SEL
R1523 R1492_DE
PHY CTRL D0 D4
EDID E0 E0
CEC C0 C4
R1552 : I2C MODE
R1551_DE : STAND ALONE MODE
DDC_VCC
SEL_HDMI2
HDMI2_DDC_SDA
HDMI2_DDC_SCL
R1556
R1557
R1558
R1559
D2_DDC_SDA
D2_DDC_SCL
IC1407
NC7WBD3125K8X


JA1401
JA1403
AGND

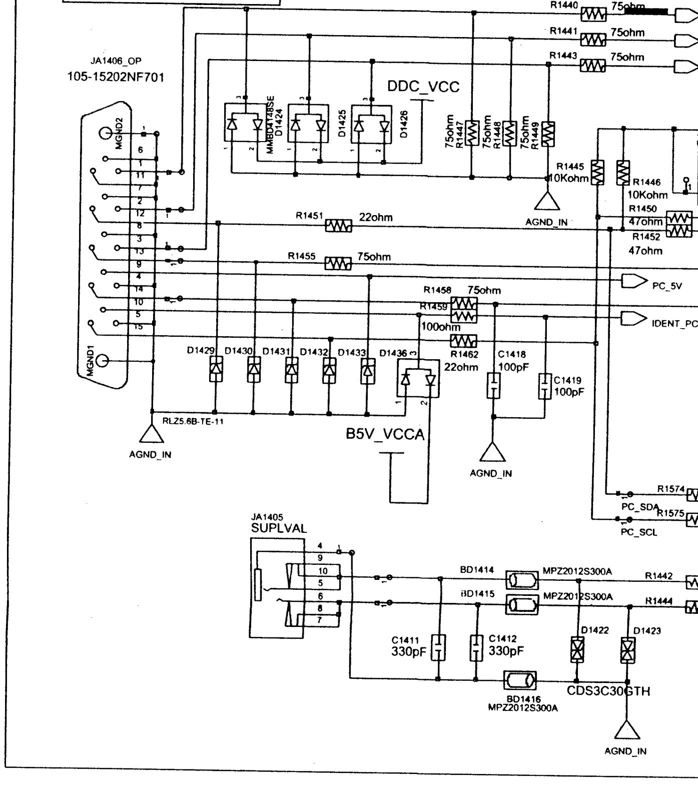

DDC_WP
IC1401
AT24C02N-10SC
DGND_IN
IDENT_HDMI1
HDMI1_DDC_SDA
HDMI1_DDC_SCL
HDMI1_HOT_PLUG
HDMI_CEC
HDMI1_RXCLK-
HDMI1_RXCLK+
HDMI1_RX0-
HDMI1_RX0+
HDMI1_RX1-
HDMI1_RX1+
HDMI1_RX2-
HDMI1_RX2+

HDMI INPUT 2

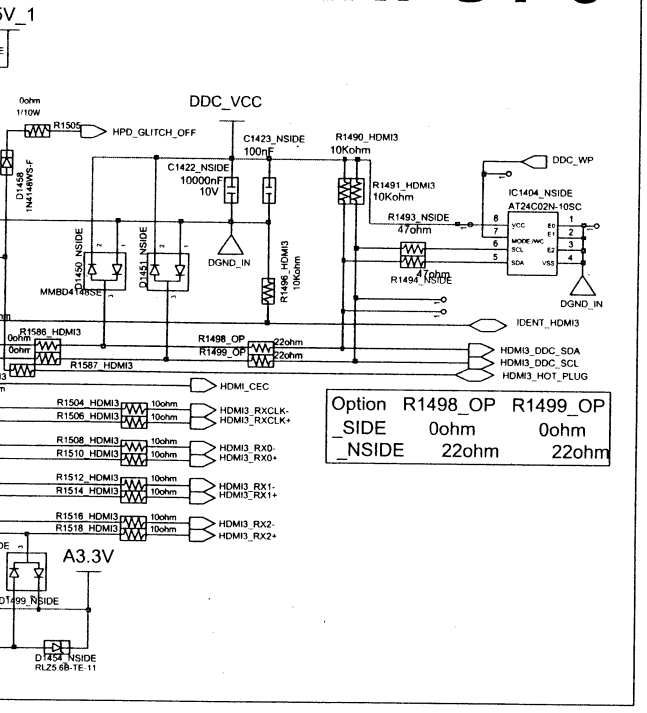

DDC_VCC
HPD_GLITCH_OFF
R1503 0ohm 1/10W
1N4148WS-F D1457
HDMI2_5V
R1578 0ohm 1/10W
RLZ6.2B D1428
D1501 RLZ6.2B
2N7002L Q1402
1Kohm R1463
R1579 100ohm
R1467 4.7Kohm
DGND_IN
C1415 10000nF 10V
C1416 100nF
R1453 10Kohm
R1454 10Kohm
R1460 47ohm
R1461 47ohm
IC1403 AT24C02N-10SC
DDC_WP
D1434
D1435
MMBD4148SE
R1465 10Kohm
DGND_IN
R1584
R1585
R1470
0ohm 1/10W
R1468 22ohm
R1469 22ohm
IDENT_HDMI2
HDMI2_DDC_SDA
HDMI2_DDC_SCL
HDMI2_HOT_PLUG
HDMI_CEC
HDMI2_RXCLK-
HDMI2_RXCLK+
HDMI2_RX0-
HDMI2_RX0+
HDMI2_RX1-
HDMI2_RX1+
HDMI2_RX2-
HDMI2_RX2+
R1543 0ohm
R1472 10ohm
R1474 10ohm
R1476 10ohm
R1478 10ohm
R1480 10ohm
R1481 10ohm
R1483 10ohm
R1486 10ohm
R1473 10ohm
R1475 10ohm
R1477 10ohm
R1479 10ohm
R1482 10ohm
R1484 10ohm
R1485 10ohm
R1487 10ohm
JA1407
DGND_IN
PGB1010603
D1481
D1482
D1483
D1484
D1485
D1486
D1487
D1488
D1489
A3.3V
D1453 RLZ5.6B-TE-11
DGND_IN

PC_I

D-SUB
LCD: 3701-001400
PDP: 3701-001294

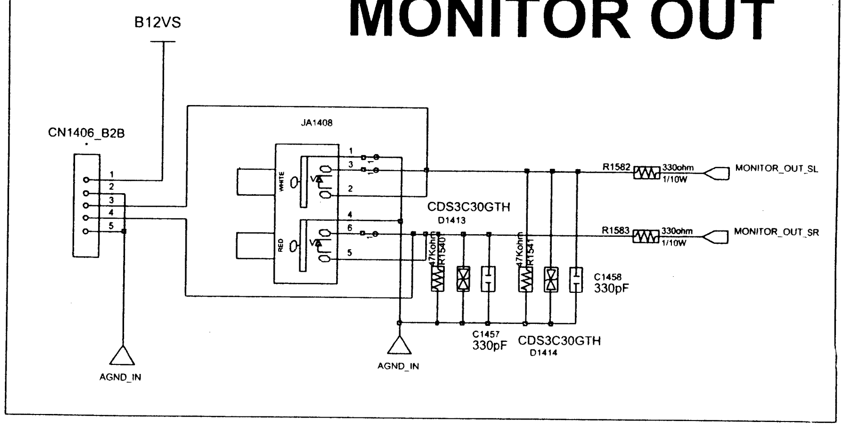

JA1406_OP
105-15202NF701
DDC_VCC
R1440 75ohm
R1441 75ohm
R1443 75ohm
MMBD4148SE D1424
D1425
D1426
75ohm R1447
75ohm R1448
75ohm R1449
R1445 10Kohm
R1446 10Kohm
R1450 47ohm
R1452 47ohm
AGND_IN
R1451 22ohm
R1455 75ohm
R1458 75ohm
R1459 100ohm
PC_5V
IDENT_PC
D1429 D1430 D1431 D1432 D1433 D1436
R1462 22ohm
C1418 100pF
C1419 100pF
RLZ5.6B-TE-11
AGND_IN
B5V_VCCA
AGND_IN
R1574
PC_SDA
R1575
PC_SCL
JA1405 SUPLVAL
BD1414 MPZ2012S300A
BD1415 MPZ2012S300A
R1442
R1444
C1411 330pF
C1412 330pF
D1422
D1423
BD1416 MPZ2012S300A
CDS3C30GTH
AGND_IN

HDMI INPUT 3

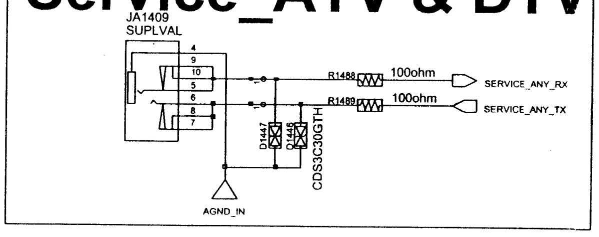

5V_1
0ohm 1/10W
R1505
HPD_GLITCH_OFF
DDC_VCC
C1423_NSIDE 100nF
C1422_NSIDE 10000nF 10V
R1490_HDMI3 10Kohm
R1491_HDMI3 10Kohm
R1493_NSIDE 47ohm
R1494_NSIDE 47ohm
IC1404_NSIDE AT24C02N-10SC
DDC_WP
DGND_IN
D1450_NSIDE
D1451_NSIDE
MMBD4148SE
DGND_IN
R1496_HDMI3 10Kohm
DGND_IN
IDENT_HDMI3
R1586_HDMI3
R1587_HDMI3
R1498_OP 22ohm
R1499_OP 22ohm
HDMI3_DDC_SDA
HDMI3_DDC_SCL
HDMI3_HOT_PLUG
HDMI_CEC
R1504_HDMI3 10ohm
R1506_HDMI3 10ohm
HDMI3_RXCLK-
HDMI3_RXCLK+
R1508_HDMI3 10ohm
R1510_HDMI3 10ohm
HDMI3_RX0-
HDMI3_RX0+
R1512_HDMI3 10ohm
R1514_HDMI3 10ohm
HDMI3_RX1-
HDMI3_RX1+
R1516_HDMI3 10ohm
R1518_HDMI3 10ohm
HDMI3_RX2-
HDMI3_RX2+
A3.3V
D1499_NSIDE
D1454_NSIDE RLZ5.6B-TE-11

Option	R1498_OP	R1499_OP
_SIDE	0ohm	0ohm
_NSIDE	22ohm	22ohm

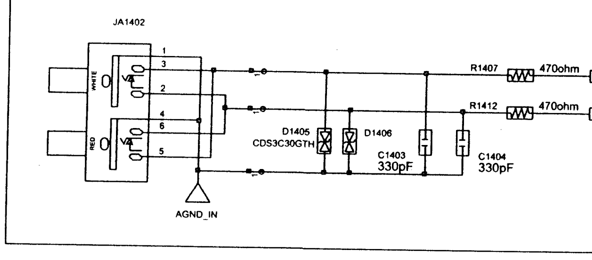
MONITOR OUT

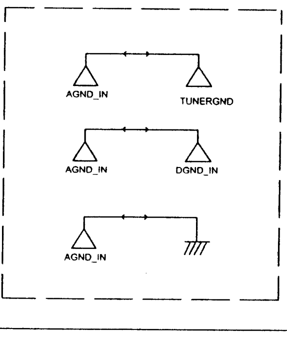

B12VS
CN1406_B2B
JA1408
WHITE
RED
R1582 330ohm 1/10W
MONITOR_OUT_SL
R1583 330ohm 1/10W
MONITOR_OUT_SR
CDS3C30GTH D1413
47Kohm R1540
47Kohm R1541
C1458 330pF
C1457 330pF
CDS3C30GTH D1414
AGND_IN
AGND_IN

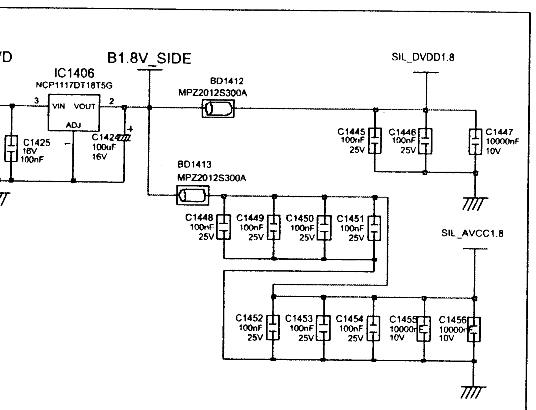
Service_ATV & DTV

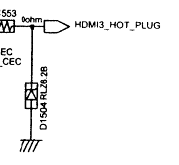

JA1409
SUPLVAL
R1488 100ohm
SERVICE_ANY_RX
R1489 100ohm
SERVICE_ANY_TX
D1447
D1448
CDS3C30GTH
AGND_IN

DVI SOUND INF


JA1402
WHITE
RED
R1407 470ohm
R1412 470ohm
D1405
CDS3C30GTH
D1406
C1403 330pF
C1404 330pF
AGND_IN


AGND_IN
TUNERGND
AGND_IN
DGND_IN
AGND_IN

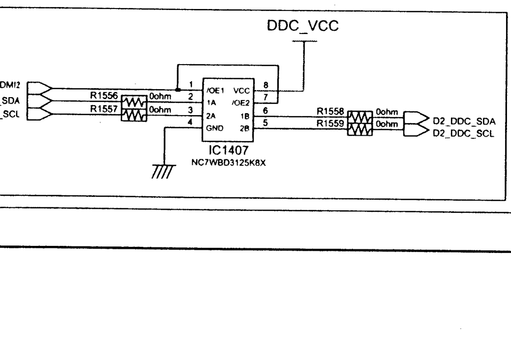

B1.8V_SIDE
IC1406
NCP1117DT18T5G
VIN VOUT
ADJ
C1425 16V 100nF
C1424 100uF 16V
BD1412 MPZ2012S300A
BD1413 MPZ2012S300A
SIL_DVDD1.8
C1445 100nF 25V
C1446 100nF 25V
C1447 10000nF 10V
C1448 100nF 25V
C1449 100nF 25V
C1450 100nF 25V
C1451 100nF 25V
SIL_AVCC1.8
C1452 100nF 25V
C1453 100nF 25V
C1454 100nF 25V
C1455 10000nF 10V
C1456 10000nF 10V


R1553
HDMI3_HOT_PLUG
CEC
D1504 RLZ6.2B

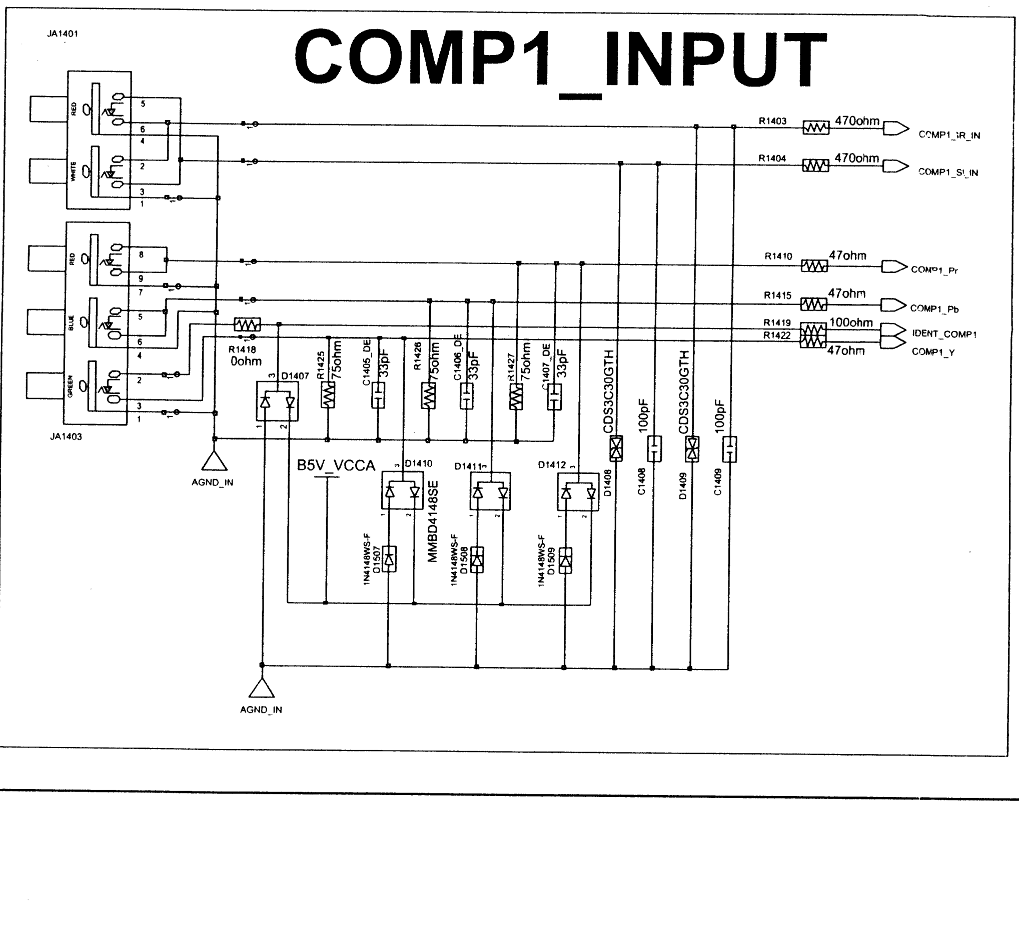
I2C ADDR SEL

	R1523	R1492_DE
PHY CTRL	D0	D4
EDID	E0	E0
CEC	C0	C4

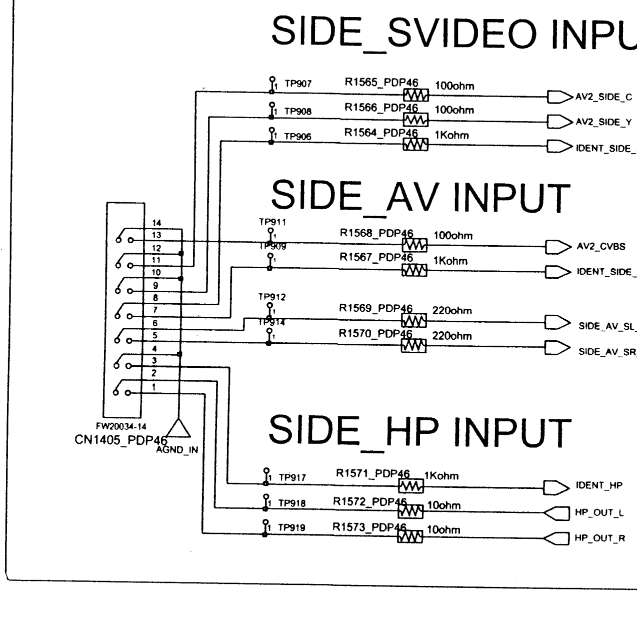
R1552 : I2C MODE
R1551_DE : STAND ALONE MODE

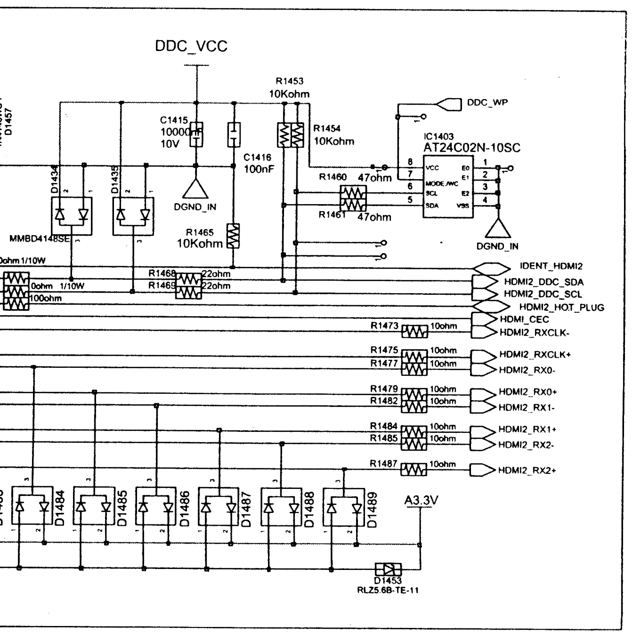

DDC_VCC
SDA
SCL
R1556 0ohm
R1557 0ohm
IC1407
NC7WBD3125K8X
/OE1 VCC
1A /OE2
2A 1B
GND 2B
R1558 0ohm
R1559 0ohm
D2_DDC_SDA
D2_DDC_SCL

COMP1_INPUT


JA1401
RED
WHITE
R1403 470ohm
COMP1_R_IN
R1404 470ohm
COMP1_SL_IN
RED
BLUE
GREEN
R1410 47ohm
COMP1_Pr
R1415 47ohm
COMP1_Pb
R1419 100ohm
R1422 47ohm
IDENT_COMP1
COMP1_Y
JA1403
R1418 0ohm
D1407
R1425 75ohm
C1405_DE 33pF
R1426 75ohm
C1406_DE 33pF
R1427 75ohm
C1407_DE 33pF
CDS3C30GTH
100pF
CDS3C30GTH
100pF
D1408
C1408
D1409
C1409
AGND_IN
B5V_VCCA
D1410
D1411
D1412
MMBD4148SE
1N4148WS-F D1507
1N4148WS-F D1508
1N4148WS-F D1509
AGND_IN

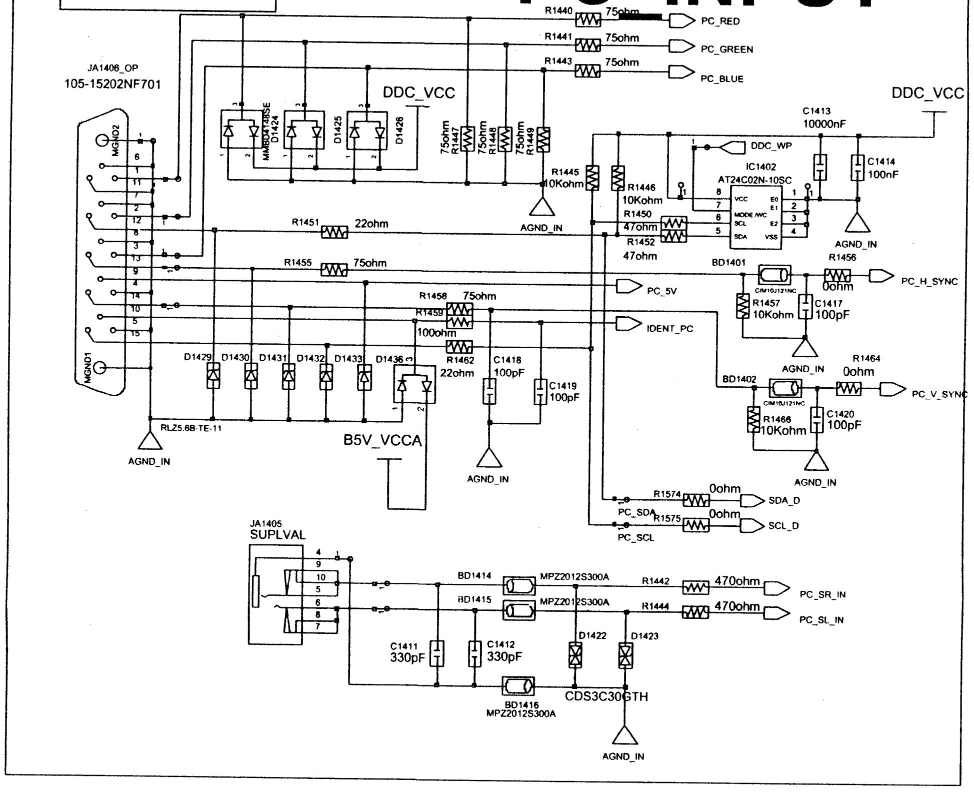
PDP_SIDE AV OI


SIDE_SVIDEO INPU
TP907
R1565_PDP46 100ohm
AV2_SIDE_C
TP908
R1566_PDP46 100ohm
AV2_SIDE_Y
TP906
R1564_PDP46 1Kohm
IDENT_SIDE
SIDE_AV INPUT
TP911
R1568_PDP46 100ohm
AV2_CVBS
TP909
R1567_PDP46 1Kohm
IDENT_SIDE
TP912
R1569_PDP46 220ohm
SIDE_AV_SL
TP914
R1570_PDP46 220ohm
SIDE_AV_SR
FW20034-14
CN1405_PDP46
AGND_IN
SIDE_HP INPUT
TP917
R1571_PDP46 1Kohm
IDENT_HP
TP918
R1572_PDP46 10ohm
HP_OUT_L
TP919
R1573_PDP46 10ohm
HP_OUT_R

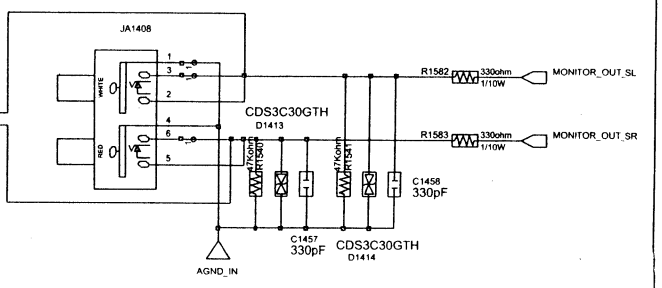

DDC_VCC
C1415
10000nF
10V
C1416
100nF
R1453
10Kohm
R1454
10Kohm
IC1403
AT24C02N-10SC
DDC_WP
R1460 47ohm
R1461 47ohm
DGND_IN
D1434
D1435
D1457
MMBD4148SE
R1465
10Kohm
0ohm 1/10W
0ohm 1/10W
100ohm
R1468 22ohm
R1469 22ohm
IDENT_HDMI2
HDMI2_DDC_SDA
HDMI2_DDC_SCL
HDMI2_HOT_PLUG
HDMI_CEC
R1473 10ohm
HDMI2_RXCLK-
R1475 10ohm
R1477 10ohm
HDMI2_RXCLK+
HDMI2_RX0-
R1479 10ohm
R1482 10ohm
HDMI2_RX0+
HDMI2_RX1-
R1484 10ohm
R1485 10ohm
HDMI2_RX1+
HDMI2_RX2-
R1487 10ohm
HDMI2_RX2+
D1484
D1485
D1486
D1487
D1488
D1489
A3.3V
D1453
RLZ5.6B-TE-11

PC_INPUT

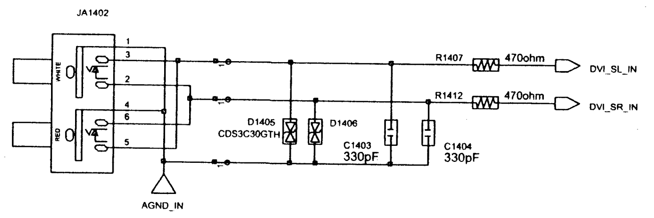
D-SUB
LCD: 3701-001400
PDP: 3701-001294


JA1406_OP
105-15202NF701
MGND2
MGND1
R1440 75ohm
PC_RED
R1441 75ohm
PC_GREEN
R1443 75ohm
PC_BLUE
DDC_VCC
MMBD4148SE
D1424
D1425
D1426
R1447 75ohm
R1448 75ohm
R1449 75ohm
AGND_IN
R1445
10Kohm
R1446
10Kohm
C1413
10000nF
DDC_WP
IC1402
AT24C02N-10SC
C1414
100nF
R1450
47ohm
R1452
47ohm
R1451 22ohm
R1455 75ohm
BD1401
R1456
0ohm
PC_H_SYNC
PC_5V
R1457
10Kohm
C1417
100pF
R1458 75ohm
R1459
100ohm
IDENT_PC
R1462
22ohm
C1418
100pF
C1419
100pF
D1429
D1430
D1431
D1432
D1433
D1436
RLZ5.6B-TE-11
B5V_VCCA
BD1402
R1464
0ohm
PC_V_SYNC
R1466
10Kohm
C1420
100pF
R1574 0ohm
SDA_D
PC_SDA
R1575 0ohm
SCL_D
PC_SCL
JA1405
SUPLVAL
BD1414
MPZ2012S300A
BD1415
MPZ2012S300A
R1442 470ohm
PC_SR_IN
R1444 470ohm
PC_SL_IN
C1411
330pF
C1412
330pF
D1422
D1423
CDS3C30GTH
BD1416
MPZ2012S300A

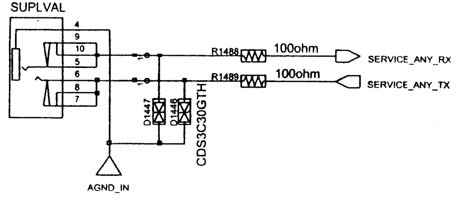
MONITOR OUT

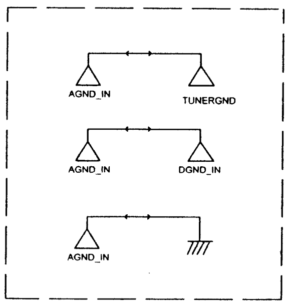

JA1408
WHITE
RED
CDS3C30GTH
D1413
R1582 330ohm 1/10W
MONITOR_OUT_SL
R1583 330ohm 1/10W
MONITOR_OUT_SR
C1458
330pF
C1457
330pF
CDS3C30GTH
D1414
AGND_IN

DVI SOUND INPUT

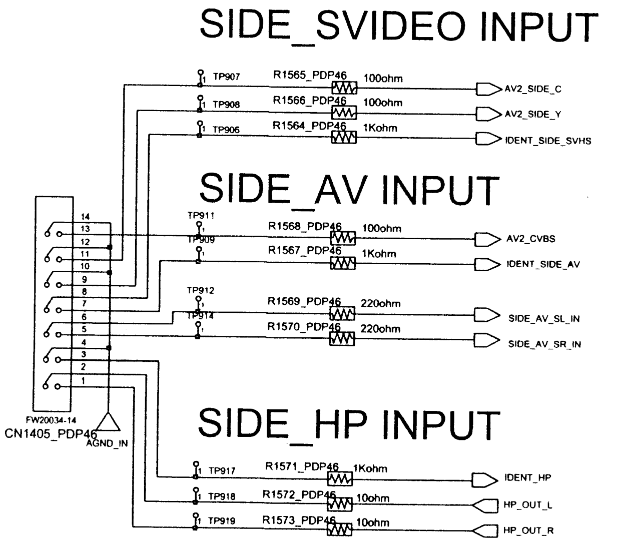

JA1402
WHITE
RED
R1407 470ohm
DVI_SL_IN
R1412 470ohm
DVI_SR_IN
D1405
CDS3C30GTH
D1406
C1403
330pF
C1404
330pF
AGND_IN

Service_ATV & DTV

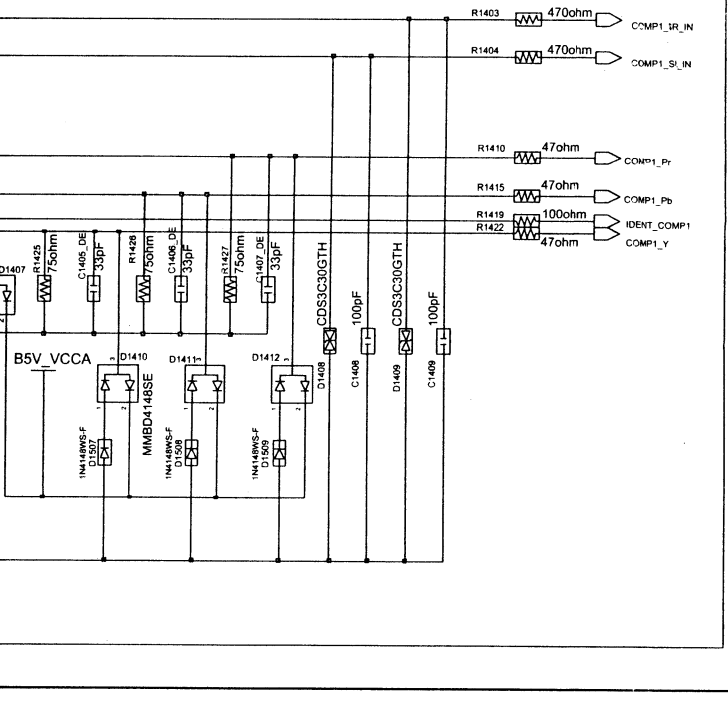

JA1409
SUPLVAL
R1488 100ohm
SERVICE_ANY_RX
R1489 100ohm
SERVICE_ANY_TX
D1447
D1448
CDS3C30GTH
AGND_IN


AGND_IN
TUNERGND
AGND_IN
DGND_IN
AGND_IN

PDP_SIDE AV OPTION


SIDE_SVIDEO INPUT
TP907
R1565_PDP46 100ohm
AV2_SIDE_C
TP908
R1566_PDP46 100ohm
AV2_SIDE_Y
TP906
R1564_PDP46 1Kohm
IDENT_SIDE_SVHS
SIDE_AV INPUT
TP911
TP909
R1568_PDP46 100ohm
AV2_CVBS
R1567_PDP46 1Kohm
IDENT_SIDE_AV
TP912
TP914
R1569_PDP46 220ohm
SIDE_AV_SL_IN
R1570_PDP46 220ohm
SIDE_AV_SR_IN
FW20034-14
CN1405_PDP46
AGND_IN
SIDE_HP INPUT
TP917
R1571_PDP46 1Kohm
IDENT_HP
TP918
R1572_PDP46 10ohm
HP_OUT_L
TP919
R1573_PDP46 10ohm
HP_OUT_R

COMP1_INPUT


R1403 470ohm
COMP1_SR_IN
R1404 470ohm
COMP1_SL_IN
R1410 47ohm
COMP1_Pr
R1415 47ohm
COMP1_Pb
R1419 100ohm
IDENT_COMP1
R1422 47ohm
COMP1_Y
D1407
R1425 75ohm
C1405_DE 33pF
R1426 75ohm
C1406_DE 33pF
R1427 75ohm
C1407_DE 33pF
CDS3C30GTH
100pF
CDS3C30GTH
100pF
B5V_VCCA
D1410
D1411
D1412
MMBD4148SE
1N4148WS-F
D1507
D1508
D1509
D1408
C1408
D1409
C1409

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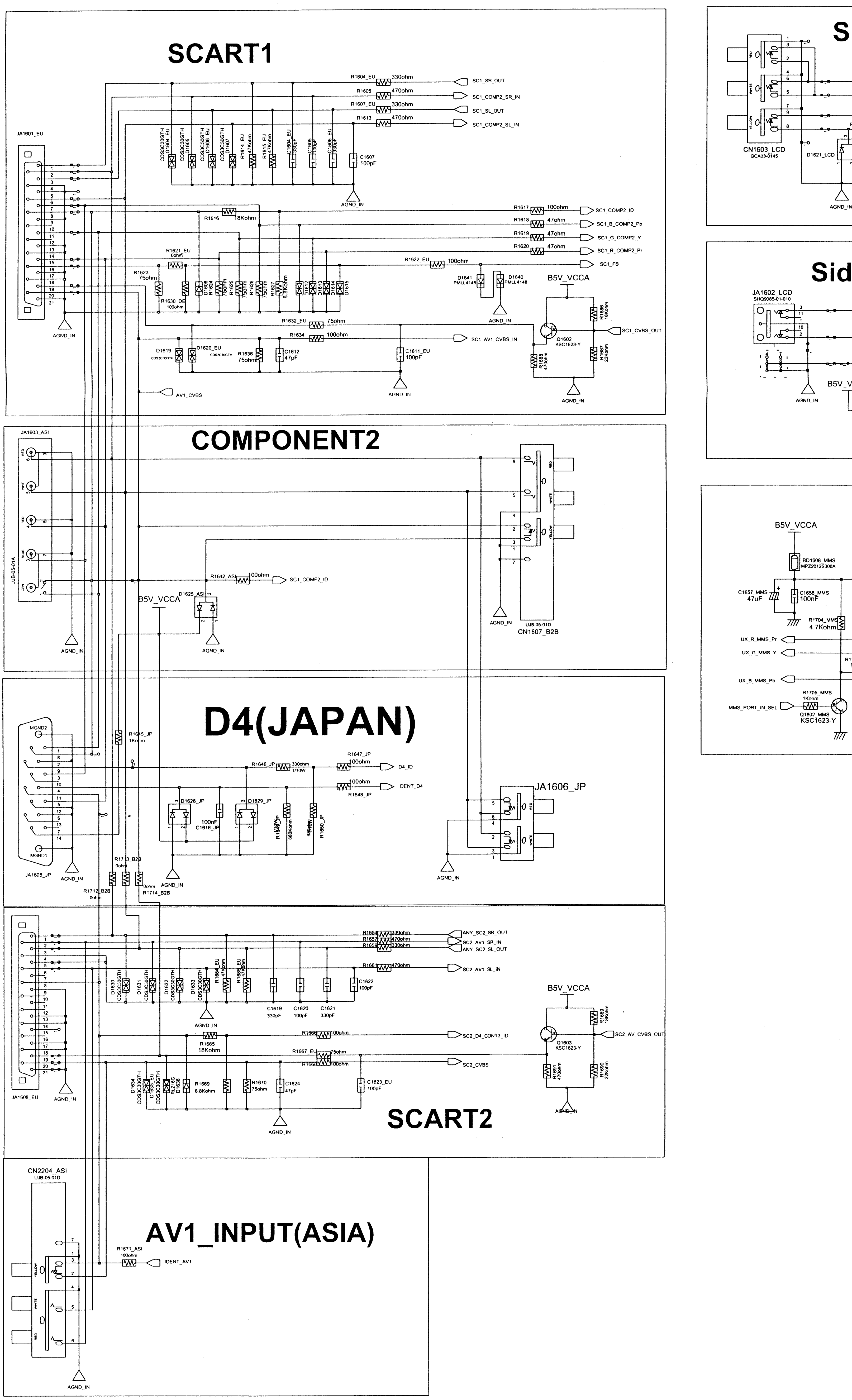
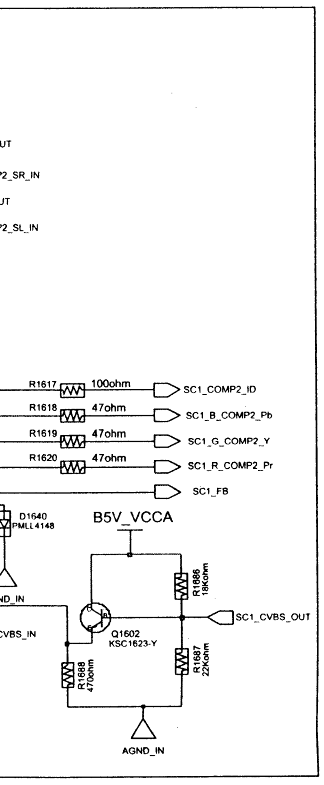
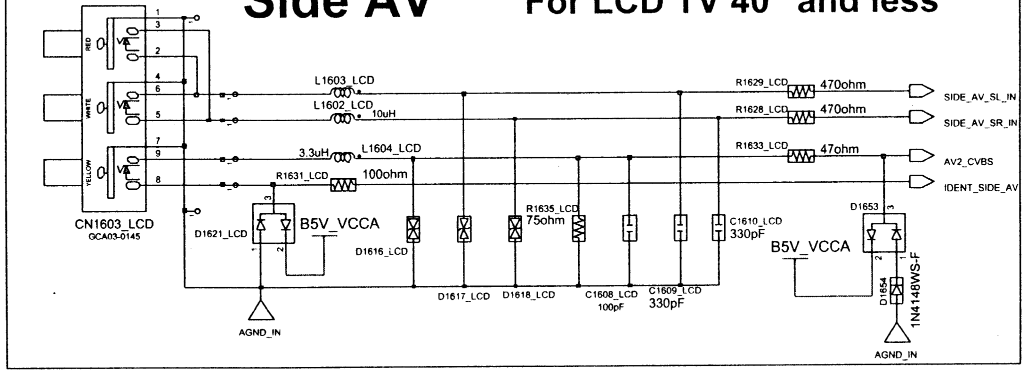
——— Power


SCART1
JA1601_EU
R1604_EU 330ohm
SC1_SR_OUT
R1605 470ohm
SC1_COMP2_SR_IN
R1607_EU 330ohm
SC1_SL_OUT
R1613 470ohm
SC1_COMP2_SL_IN
C1607 100pF
AGND_IN
R1616 18Kohm
R1617 100ohm
SC1_COMP2_ID
R1618 47ohm
SC1_B_COMP2_Pb
R1619 47ohm
SC1_G_COMP2_Y
R1620 47ohm
SC1_R_COMP2_Pr
R1621_EU 0ohm
R1622_EU 100ohm
SC1_FB
R1623 75ohm
R1630_DE
D1641 PMLL4148
D1640 PMLL4148
B5V_VCCA
R1632_EU 75ohm
R1634 100ohm
SC1_AV1_CVBS_IN
Q1602 KSC1623-Y
SC1_CVBS_OUT
D1619
D1620_EU
R1636 75ohm
C1612 47pF
C1611_EU 100pF
AV1_CVBS
COMPONENT2
JA1603_ASI
UJB-05-01A
R1642_ASI 100ohm
SC1_COMP2_ID
B5V_VCCA
D1625_ASI
UJB-05-01D
CN1607_B2B
D4(JAPAN)
MGND2
MGND1
JA1605_JP
R1645_JP 1Kohm
R1647_JP 100ohm
R1646_JP 330ohm 1/10W
D4_ID
R1648_JP 100ohm
DENT_D4
D1628_JP
D1629_JP
100nF C1616_JP
JA1606_JP
R1713_B2B 0ohm
R1712_B2B 0ohm
R1714_B2B
ANY_SC2_SR_OUT
SC2_AV1_SR_IN
ANY_SC2_SL_OUT
SC2_AV1_SL_IN
C1622 100pF
C1619 330pF
C1620 100pF
C1621 330pF
B5V_VCCA
R1665 18Kohm
R1666 100ohm
SC2_D4_CONT3_ID
Q1603 KSC1623-Y
SC2_AV_CVBS_OUT
R1667_EU 75ohm
R1668 100ohm
SC2_CVBS
R1669 6.8Kohm
R1670 75ohm
C1624 47pF
C1623_EU 100pF
JA1608_EU
SCART2
CN2204_ASI
UJB-05-01D
AV1_INPUT(ASIA)
R1671_ASI 100ohm
IDENT_AV1
CN1603_LCD
D1621_LCD
JA1602_LCD
B5V_VCCA
BD1608_MMS
C1657_MMS 47uF
C1656_MMS 100nF
R1704_MMS 4.7Kohm
UX_R_MMS_Pr
UX_G_MMS_Y
UX_B_MMS_Pb
R1705_MMS 1Kohm
MMS_PORT_IN_SEL
Q1802_MMS KSC1623-Y


R1617 100ohm
SC1_COMP2_ID
R1618 47ohm
SC1_B_COMP2_Pb
R1619 47ohm
SC1_G_COMP2_Y
R1620 47ohm
SC1_R_COMP2_Pr
SC1_FB
D1640
B5V_VCCA
Q1602 KSC1623-Y
SC1_CVBS_OUT
R1686
R1687
R1688
AGND_IN

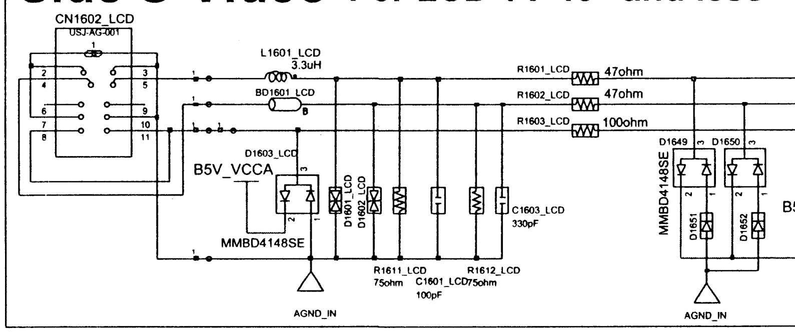
Side AV

For LCD TV 40" and less

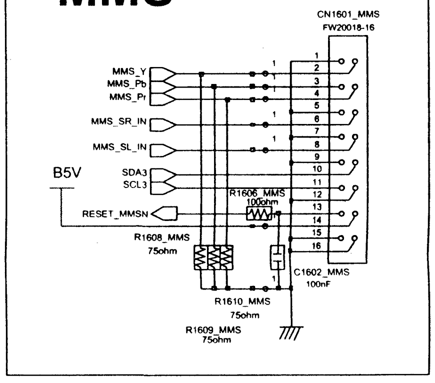

CN1603_LCD
GCA03-0145
RED
WHITE
YELLOW
L1603_LCD
L1602_LCD 10uH
3.3uH L1604_LCD
R1631_LCD 100ohm
R1629_LCD 470ohm
R1628_LCD 470ohm
R1633_LCD 47ohm
SIDE_AV_SL_IN
SIDE_AV_SR_IN
AV2_CVBS
IDENT_SIDE_AV
D1621_LCD
B5V_VCCA
D1616_LCD
R1635_LCD 75ohm
D1617_LCD
D1618_LCD
C1608_LCD 100pF
C1609_LCD 330pF
C1610_LCD 330pF
D1653
B5V_VCCA
D1654 1N4148WS-F
AGND_IN

Side S-Video

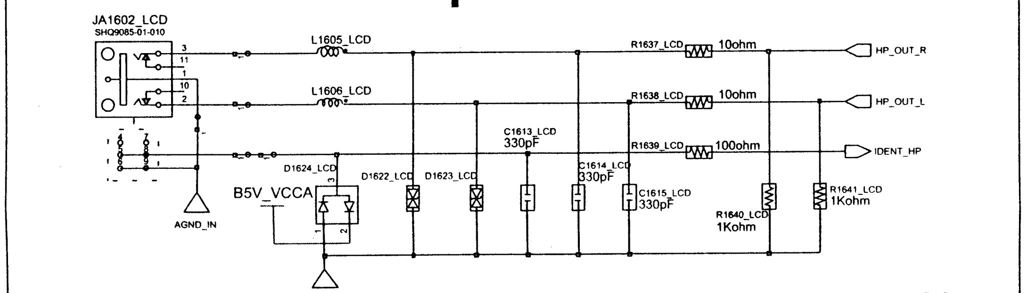
For LCD TV 40" and less


CN1602_LCD
USJ-AG-001
L1601_LCD 3.3uH
BD1601_LCD
R1601_LCD 47ohm
R1602_LCD 47ohm
R1603_LCD 100ohm
D1603_LCD
B5V_VCCA
MMBD4148SE
D1601_LCD
D1602_LCD
C1603_LCD 330pF
R1611_LCD 75ohm
C1601_LCD 100pF
R1612_LCD 75ohm
D1649
D1650
MMBD4148SE
D1651
D1652
AGND_IN

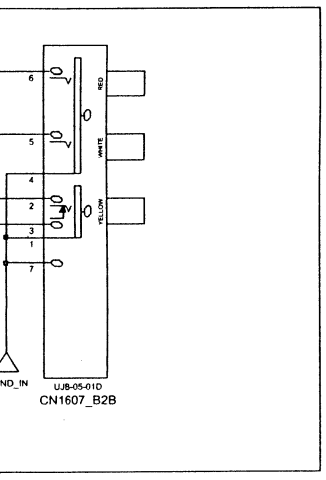
MMS


CN1601_MMS
FW20018-16
MMS_Y
MMS_Pb
MMS_Pr
MMS_SR_IN
MMS_SL_IN
B5V
SDA3
SCL3
RESET_MMSN
R1606_MMS 100ohm
R1608_MMS 75ohm
R1610_MMS 75ohm
R1609_MMS 75ohm
C1602_MMS 100nF

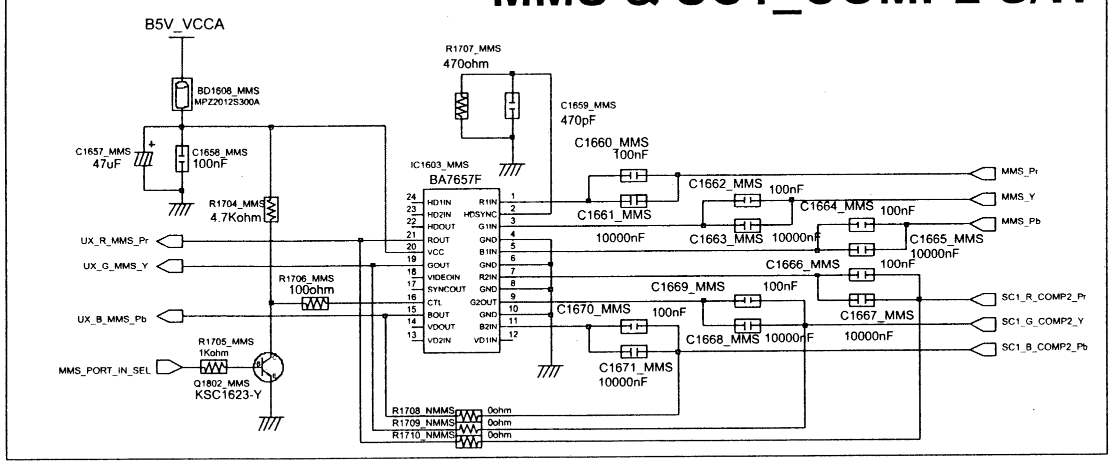
Side Headphone


JA1602_LCD
SHQ9085-01-010
L1605_LCD
L1606_LCD
R1637_LCD 10ohm
R1638_LCD 10ohm
R1639_LCD 100ohm
HP_OUT_R
HP_OUT_L
IDENT_HP
C1613_LCD 330pF
D1624_LCD
D1622_LCD
D1623_LCD
C1614_LCD 330pF
C1615_LCD 330pF
R1640_LCD 1Kohm
R1641_LCD 1Kohm
B5V_VCCA
AGND_IN

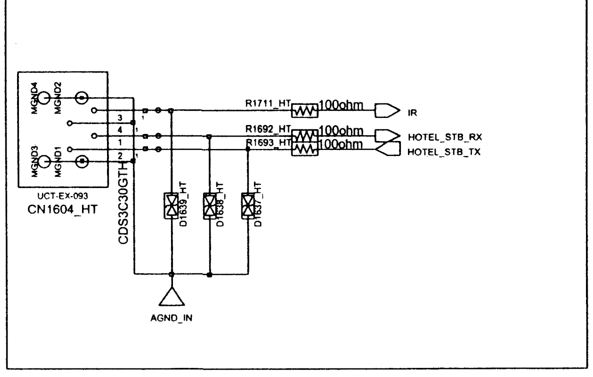
For LCD TV 40" and less

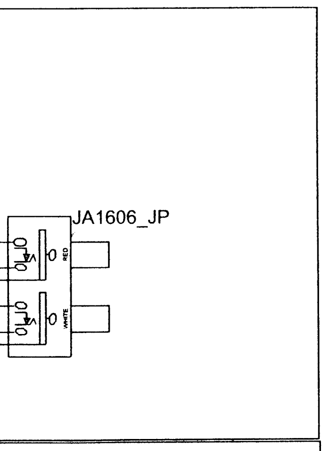

RED
WHITE
YELLOW
UJB-05-01D
CN1607_B2B

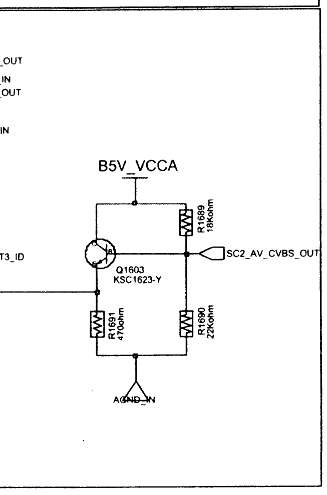
MMS & SC1_COMP2 S/W


B5V_VCCA
BD1606_MMS MPZ2012S300A
C1657_MMS 47uF
C1658_MMS 100nF
R1704_MMS 4.7Kohm
R1707_MMS 470ohm
C1659_MMS 470pF
IC1603_MMS BA7657F
C1660_MMS 100nF
C1661_MMS 10000nF
C1662_MMS 100nF
C1663_MMS 10000nF
C1664_MMS 100nF
C1665_MMS 10000nF
C1666_MMS 100nF
C1667_MMS 10000nF
C1668_MMS 10000nF
C1669_MMS 100nF
C1670_MMS 100nF
C1671_MMS 10000nF
UX_R_MMS_Pr
UX_G_MMS_Y
UX_B_MMS_Pb
R1706_MMS 100ohm
R1705_MMS 1Kohm
MMS_PORT_IN_SEL
Q1802_MMS KSC1623-Y
MMS_Pr
MMS_Y
MMS_Pb
SC1_R_COMP2_Pr
SC1_G_COMP2_Y
SC1_B_COMP2_Pb
R1708_NMMS 0ohm
R1709_NMMS 0ohm
R1710_NMMS 0ohm

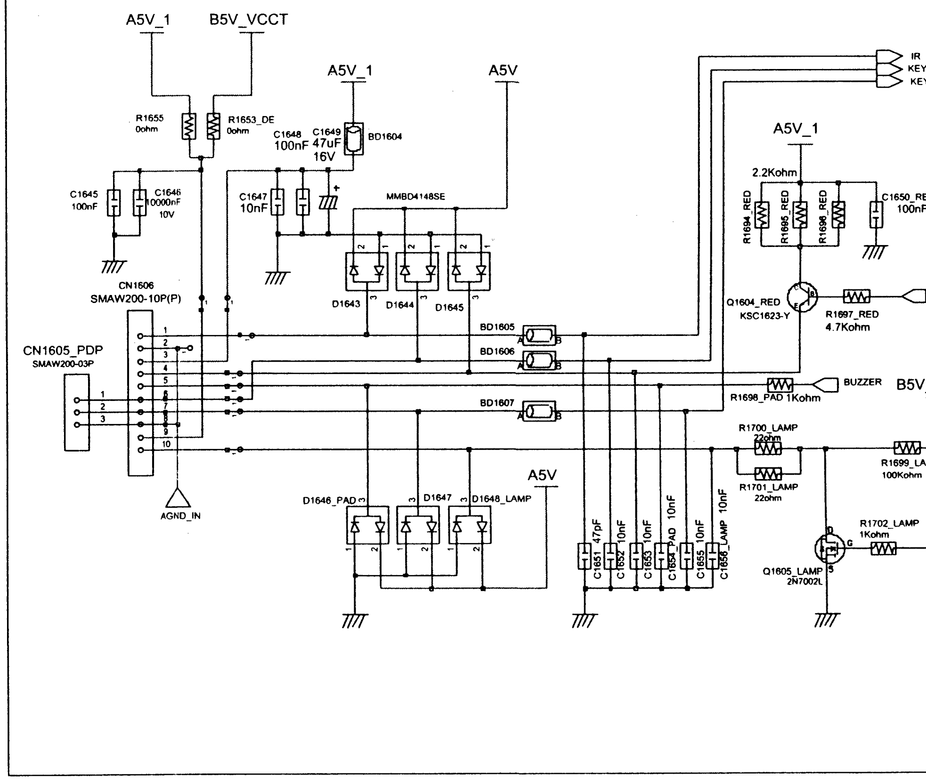
HOTEL OPTION


R1711_HT 100ohm
IR
R1692_HT 100ohm
R1693_HT 100ohm
HOTEL_STB_RX
HOTEL_STB_TX
UCT-EX-093
CN1604_HT
CDS3C30GTH
D1639_HT
D1636_HT
D1637_HT
AGND_IN

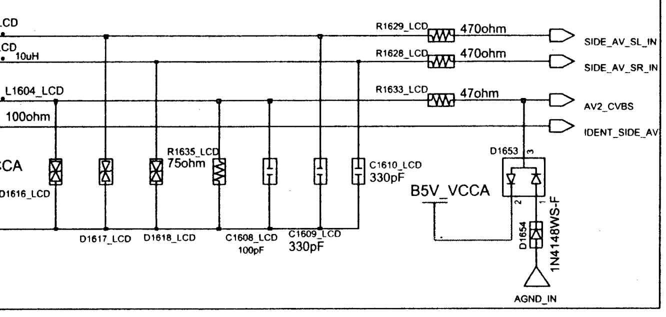

JA1606_JP
RED
WHITE


B5V_VCCA
R1689
Q1603 KSC1623-Y
SC2_AV_CVBS_OUT
R1691 470ohm
R1690 22Kohm
AGND_IN

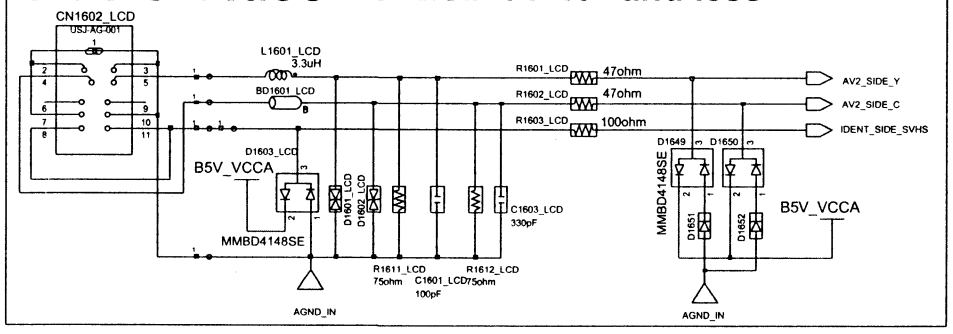
Function


A5V_1
B5V_VCCT
A5V_1
A5V
R1655 0ohm
R1653_DE 0ohm
C1648 100nF
C1649 47uF 16V
BD1604
C1645 100nF
C1646 10000nF 10V
C1647 10nF
MMBD4148SE
CN1506 SMAW200-10P(P)
CN1605_PDP SMAW200-03P
D1643
D1644
D1645
BD1605
BD1606
BD1607
IR
A5V_1
2.2Kohm
R1694_RED
R1695_RED
R1696_RED
C1650_RED 100nF
Q1604_RED KSC1623-Y
R1697_RED 4.7Kohm
R1698_PAD 1Kohm
BUZZER
R1700_LAMP 22ohm
R1701_LAMP 22ohm
R1699_LAMP 100Kohm
R1702_LAMP 1Kohm
Q1605_LAMP 2N7002L
A5V
D1646_PAD
D1647
D1648_LAMP
C1651 47pF
AGND_IN

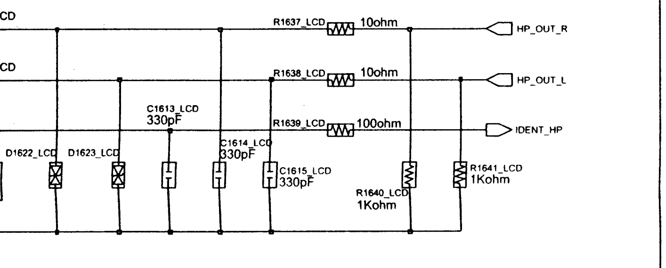
AV For LCD TV 40" and less


LCD
LCD
10uH
L1604_LCD
100ohm
CA
D1616_LCD
D1617_LCD
D1618_LCD
R1635_LCD
75ohm
C1608_LCD
100pF
C1609_LCD
330pF
C1610_LCD
330pF
R1629_LCD
470ohm
R1628_LCD
470ohm
R1633_LCD
47ohm
SIDE_AV_SL_IN
SIDE_AV_SR_IN
AV2_CVBS
IDENT_SIDE_AV
D1653
B5V_VCCA
D1654
1N4148WS-F
AGND_IN

Side S-Video For LCD TV 40" and less

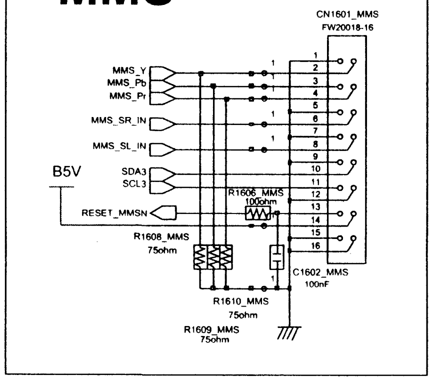

CN1602_LCD
USJ-AG-001
L1601_LCD
3.3uH
BD1601_LCD
D1603_LCD
B5V_VCCA
MMBD4148SE
D1601_LCD
D1602_LCD
R1611_LCD
75ohm
C1601_LCD
100pF
R1612_LCD
75ohm
C1603_LCD
330pF
R1601_LCD
47ohm
R1602_LCD
47ohm
R1603_LCD
100ohm
AV2_SIDE_Y
AV2_SIDE_C
IDENT_SIDE_SVHS
D1649
D1650
MMBD4148SE
D1651
D1652
B5V_VCCA
AGND_IN
AGND_IN

leadphone

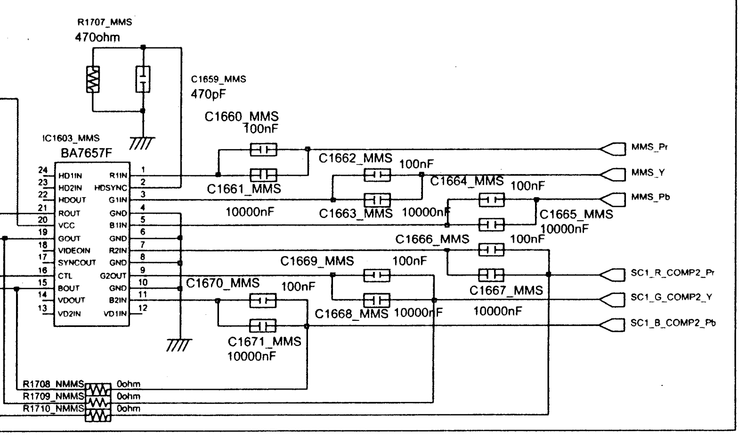

CD
CD
R1637_LCD
10ohm
R1638_LCD
10ohm
R1639_LCD
100ohm
HP_OUT_R
HP_OUT_L
IDENT_HP
C1613_LCD
330pF
C1614_LCD
330pF
C1615_LCD
330pF
D1622_LCD
D1623_LCD
R1640_LCD
1Kohm
R1641_LCD
1Kohm

For LCD TV 40" and less

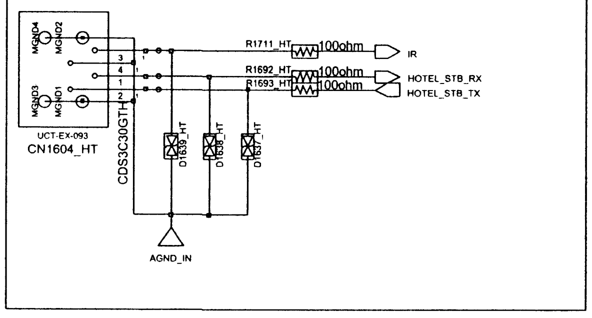
MMS


CN1601_MMS
FW20018-16
MMS_Y
MMS_Pb
MMS_Pr
MMS_SR_IN
MMS_SL_IN
B5V
SDA3
SCL3
RESET_MMSN
R1606_MMS
100ohm
R1608_MMS
75ohm
R1610_MMS
75ohm
R1609_MMS
75ohm
C1602_MMS
100nF

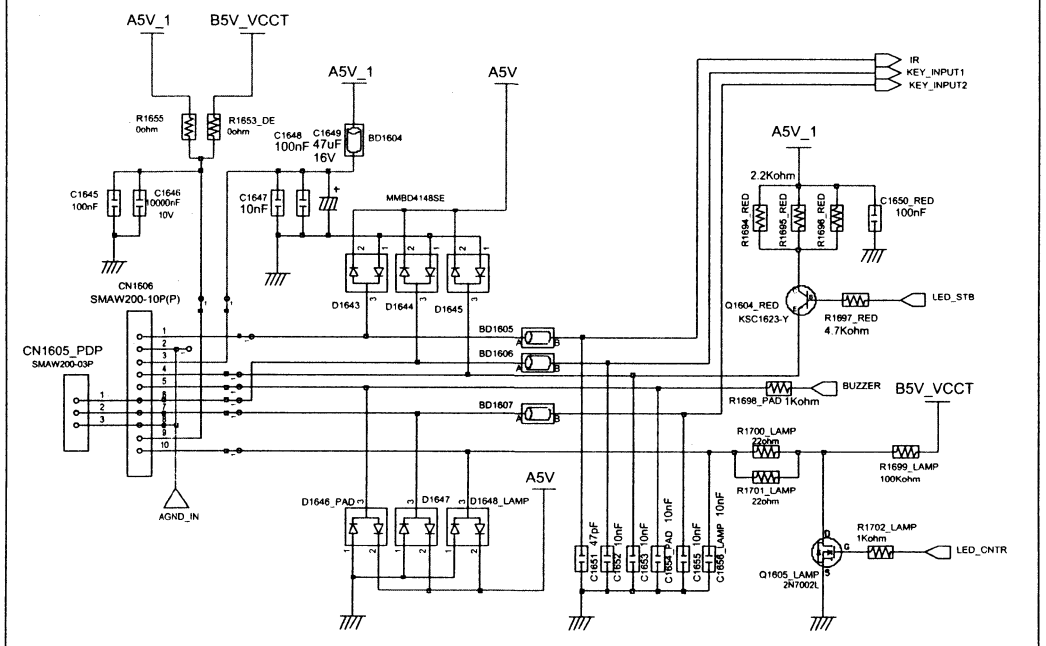
MMS & SC1_COMP2 S/W


R1707_MMS
470ohm
C1659_MMS
470pF
C1660_MMS
100nF
IC1603_MMS
BA7657F
HD1IN
HD2IN
HDOUT
ROUT
VCC
GOUT
VIDEOIN
SYNCOUT
CTL
BOUT
VDOUT
VD2IN
R1IN
HDSYNC
G1IN
GND
B1IN
GND
R2IN
GND
G2OUT
GND
B2IN
VD1IN
C1661_MMS
10000nF
C1662_MMS
100nF
C1663_MMS
10000nF
C1664_MMS
100nF
C1665_MMS
10000nF
C1666_MMS
100nF
C1667_MMS
10000nF
C1668_MMS
10000nF
C1669_MMS
100nF
C1670_MMS
100nF
C1671_MMS
10000nF
MMS_Pr
MMS_Y
MMS_Pb
SC1_R_COMP2_Pr
SC1_G_COMP2_Y
SC1_B_COMP2_Pb
R1708_NMMS
0ohm
R1709_NMMS
0ohm
R1710_NMMS
0ohm

HOTEL OPTION


MGND4
MGND2
MGND3
MGND1
UCT-EX-093
CN1604_HT
CDS3C30GTH
R1711_HT
100ohm
R1692_HT
100ohm
R1693_HT
100ohm
IR
HOTEL_STB_RX
HOTEL_STB_TX
D1639_HT
D1638_HT
D1637_HT
AGND_IN

Function


A5V_1
B5V_VCCT
A5V_1
A5V
R1655
0ohm
R1653_DE
0ohm
C1648
100nF
C1649
47uF
16V
BD1604
C1645
100nF
C1646
10000nF
10V
C1647
10nF
MMBD4148SE
D1643
D1644
D1645
CN1606
SMAW200-10P(P)
CN1605_PDP
SMAW200-03P
AGND_IN
BD1605
BD1606
BD1607
D1646_PAD
D1647
D1648_LAMP
A5V
C1651 47pF
C1652 10nF
C1653 10nF
C1654_PAD 10nF
C1655 10nF
C1656_LAMP 10nF
IR
KEY_INPUT1
KEY_INPUT2
A5V_1
2.2Kohm
R1694_RED
R1695_RED
R1696_RED
C1650_RED
100nF
Q1604_RED
KSC1623-Y
R1697_RED
4.7Kohm
LED_STB
R1698_PAD 1Kohm
BUZZER
B5V_VCCT
R1700_LAMP
22ohm
R1701_LAMP
22ohm
R1699_LAMP
100Kohm
R1702_LAMP
1Kohm
LED_CNTR
Q1605_LAMP
2N7002L

7-2-5 MICOM

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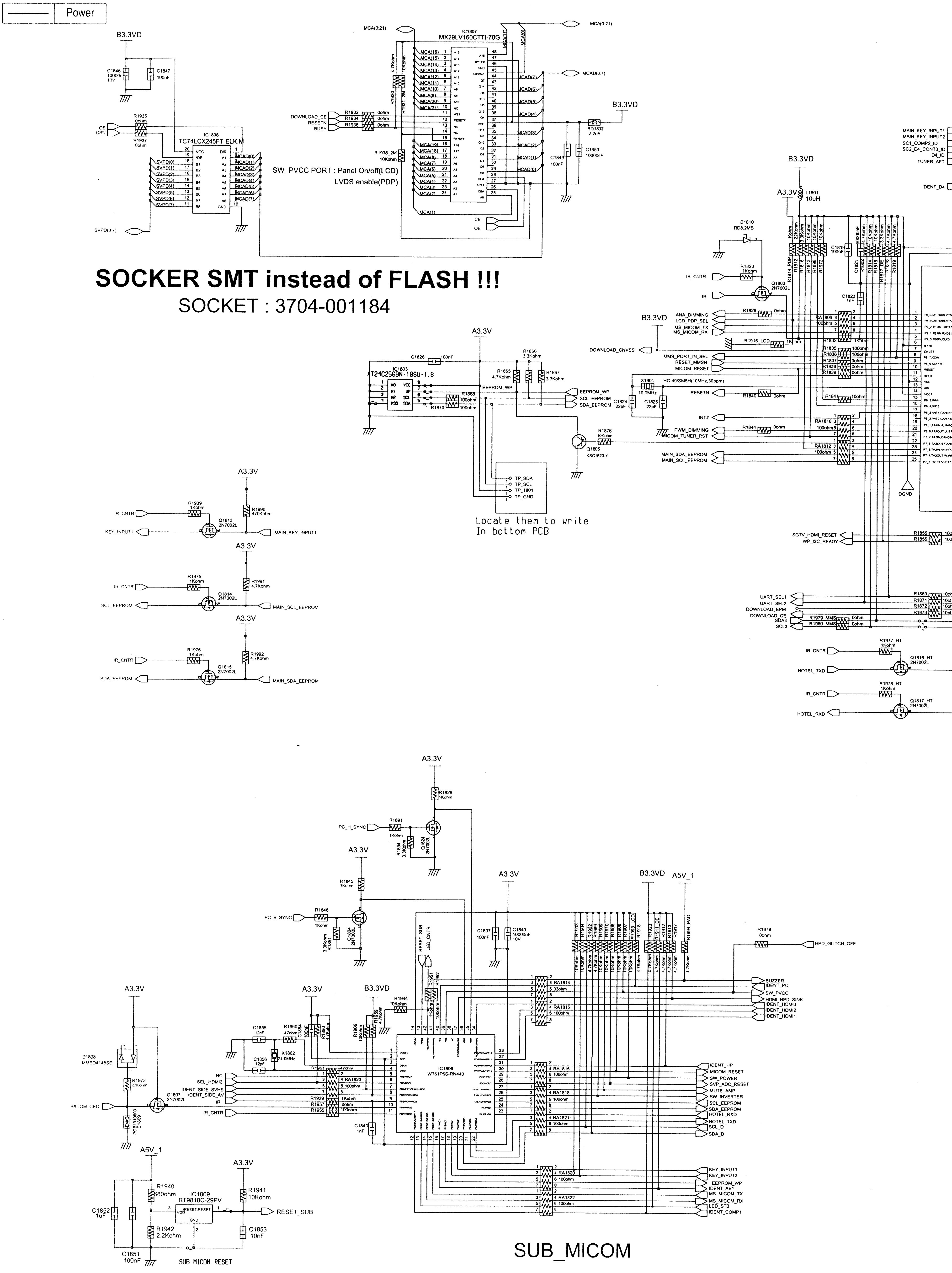
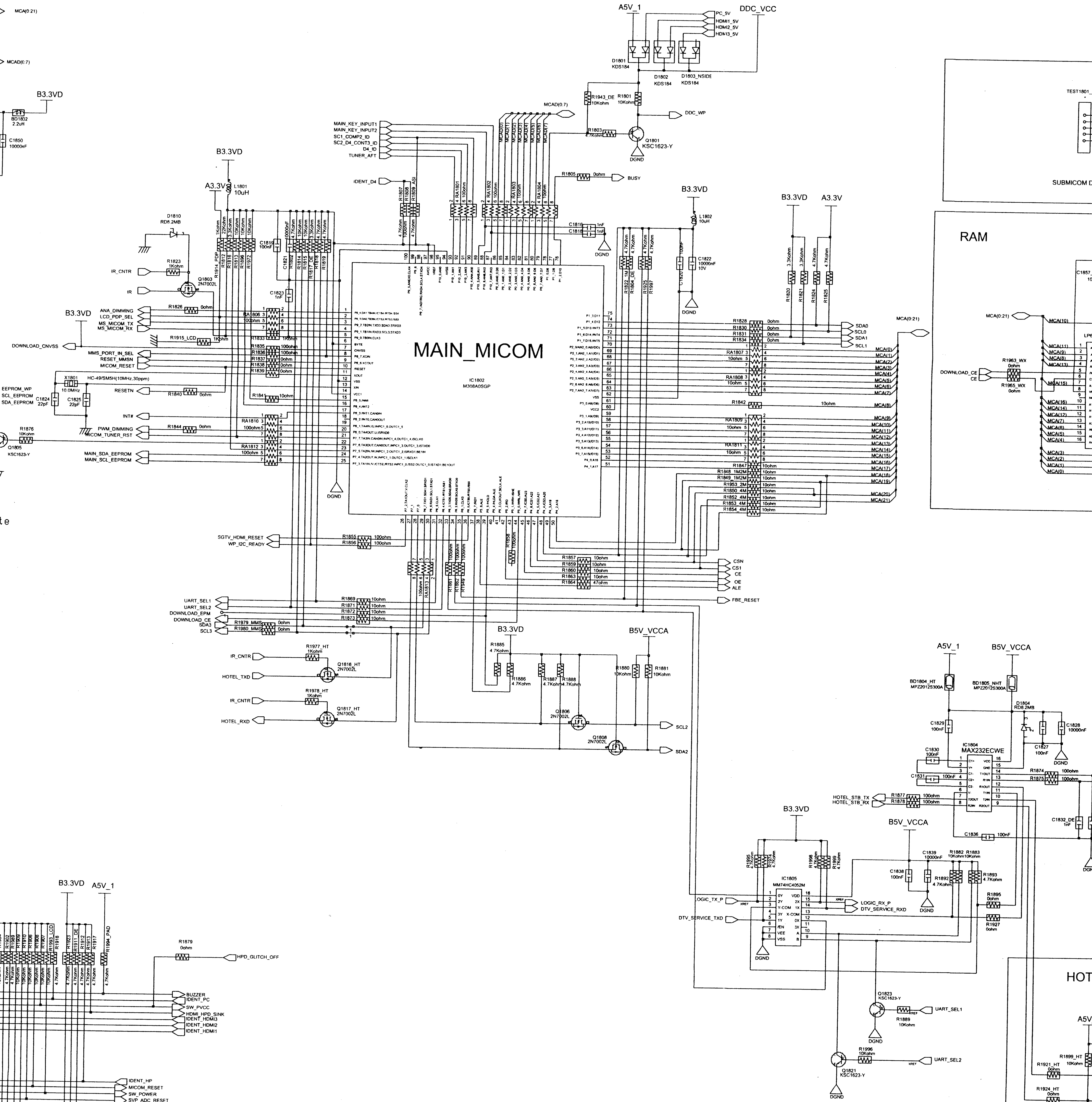
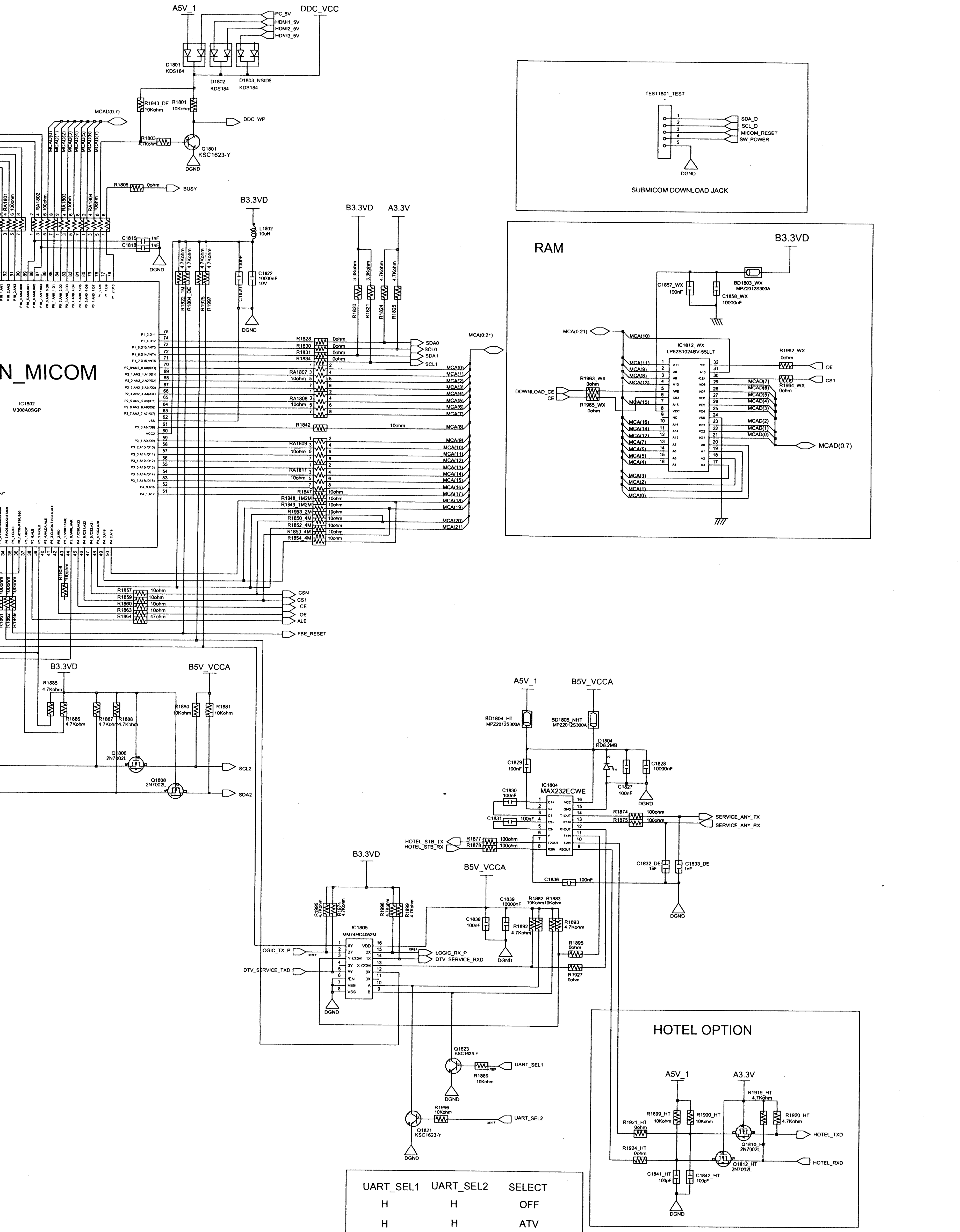

Power
B3.3VD
IC1806
TC74LCX245FT-ELK,M
IC1807
MX29LV160CTTI-70G
MCA(0:21)
MCAD(0:7)
SVPD(0:7)
DOWNLOAD_CE
RESETN
BUSY
OE
CSN
CE
BD1802
2.2uH
SW_PVCC PORT : Panel On/off(LCD)
LVDS enable(PDP)
SOCKER SMT instead of FLASH !!!
SOCKET : 3704-001184
A3.3V
IC1803
AT24C256BN-10SU-1.8
EEPROM_WP
SCL_EEPROM
SDA_EEPROM
X1801
10.0MHz
HC-49/SMSH(10MHz,30ppm)
Q1805
KSC1623-Y
TP_SDA
TP_SCL
TP_1801
TP_GND
Locate them to write
In bottom PCB
IR_CNTR
KEY_INPUT1
MAIN_KEY_INPUT1
SCL_EEPROM
MAIN_SCL_EEPROM
SDA_EEPROM
MAIN_SDA_EEPROM
Q1813
2N7002L
Q1814
2N7002L
Q1815
2N7002L
L1801
10uH
D1810
Q1803
2N7002L
ANA_DIMMING
LCD_PDP_SEL
MS_MICOM_TX
MS_MICOM_RX
DOWNLOAD_CNVSS
MMS_PORT_IN_SEL
RESET_MMSN
MICOM_RESET
INT#
PWM_DIMMING
MICOM_TUNER_RST
MAIN_SDA_EEPROM
MAIN_SCL_EEPROM
MAIN_KEY_INPUT1
MAIN_KEY_INPUT2
SC1_COMP2_ID
SC2_D4_CONT3_ID
D4_ID
TUNER_AFT
IDENT_D4
DGND
SGTV_HDMI_RESET
WP_I2C_READY
UART_SEL1
UART_SEL2
DOWNLOAD_EPM
DOWNLOAD_CE
SDA3
SCL3
HOTEL_TXD
HOTEL_RXD
Q1816_HT
2N7002L
Q1817_HT
2N7002L
PC_H_SYNC
PC_V_SYNC
A5V_1
HPD_GLITCH_OFF
IC1806
WT61P6S-RN440
RESET_SUB
LED_CNTR
BUZZER
IDENT_PC
SW_PVCC
HDMI_HPD_SINK
IDENT_HDMI3
IDENT_HDMI2
IDENT_HDMI1
IDENT_HP
MICOM_RESET
SW_POWER
SVP_ADC_RESET
MUTE_AMP
SW_INVERTER
SCL_EEPROM
SDA_EEPROM
HOTEL_RXD
HOTEL_TXD
SCL_D
SDA_D
KEY_INPUT1
KEY_INPUT2
EEPROM_WP
IDENT_AV1
MS_MICOM_TX
MS_MICOM_RX
LED_STB
IDENT_COMP1
NC
SEL_HDMI2
IDENT_SIDE_SVHS
IDENT_SIDE_AV
IR
IR_CNTR
X1802
24.0MHz
D1808
MMBD4148SE
Q1807
2N7002L
MICOM_CEC
IC1809
RT9818C-29PV
RESET_SUB
SUB MICOM RESET
SUB_MICOM


MAIN_MICOM
IC1802
M308A0SGP
RAM
SUBMICOM
HOT
TEST1801
A5V_1
DDC_VCC
PC_5V
HDMI1_5V
HDMI2_5V
HDMI3_5V
D1801
KDS184
D1802
KDS184
D1803_NSIDE
KDS184
R1943_DE
10Kohm
R1801
10Kohm
DDC_WP
R1803
4.7Kohm
Q1801
KSC1623-Y
DGND
MCAD(0:7)
MCA(0:21)
B3.3VD
A3.3V
L1801
10uH
BD1802
2.2uH
C1850
10000nF
D1810
RD8.2MB
R1823
1Kohm
Q1803
2N7002L
IR_CNTR
IR
ANA_DIMMING
LCD_PDP_SEL
MS_MICOM_TX
MS_MICOM_RX
DOWNLOAD_CNVSS
MMS_PORT_IN_SEL
RESET_MMSN
MICOM_RESET
EEPROM_WP
SCL_EEPROM
SDA_EEPROM
X1801
HC-49/SM5H(10MHz,30ppm)
10.0MHz
C1824
22pF
C1825
22pF
RESETN
INT#
PWM_DIMMING
MICOM_TUNER_RST
Q1805
KSC1623-Y
MAIN_SDA_EEPROM
MAIN_SCL_EEPROM
MAIN_KEY_INPUT1
MAIN_KEY_INPUT2
SC1_COMP2_ID
SC2_D4_CONT3_ID
D4_ID
TUNER_AFT
IDENT_D4
R1805
BUSY
L1802
10uH
C1822
10000nF
10V
SDA0
SCL0
SDA1
SCL1
SGTV_HDMI_RESET
WP_I2C_READY
CSN
CS1
CE
OE
ALE
FBE_RESET
UART_SEL1
UART_SEL2
DOWNLOAD_EPM
DOWNLOAD_CE
SDA3
SCL3
R1977_HT
1Kohm
Q1816_HT
2N7002L
HOTEL_TXD
R1978_HT
1Kohm
Q1817_HT
2N7002L
HOTEL_RXD
B5V_VCCA
R1885
4.7Kohm
R1886
4.7Kohm
R1887
4.7Kohm
R1888
4.7Kohm
R1880
10Kohm
R1881
10Kohm
Q1806
2N7002L
Q1808
2N7002L
SCL2
SDA2
R1963_WX
R1965_WX
DOWNLOAD_CE
BD1804_HT
MPZ2012S300A
BD1805_NHT
MPZ2012S300A
D1804
RD8.2MB
IC1804
MAX232ECWE
C1829
100nF
C1828
10000nF
C1827
100nF
C1830
100nF
C1831
100nF
R1874
100ohm
R1875
100ohm
HOTEL_STB_TX
HOTEL_STB_RX
R1877
R1878
C1836
100nF
C1832_DE
1nF
IC1805
MM74HC4052M
LOGIC_TX_P
LOGIC_RX_P
DTV_SERVICE_RXD
DTV_SERVICE_TXD
C1839
10000nF
C1838
100nF
R1882
10Kohm
R1883
10Kohm
R1892
4.7Kohm
R1893
4.7Kohm
R1895
0ohm
R1927
0ohm
Q1823
KSC1623-Y
R1889
10Kohm
Q1821
KSC1623-Y
R1996
10Kohm
R1994_PAD
4.7Kohm
R1679
0ohm
HPD_GLITCH_OFF
BUZZER
IDENT_PC
SW_PVCC
HDMI_HPD_SINK
IDENT_HDMI3
IDENT_HDMI2
IDENT_HDMI1
IDENT_HP
MICOM_RESET
SW_POWER
SVP_ADC_RESET
MUTE_AMP
SW_INVERTER
SCL_EEPROM
SDA_EEPROM
HOTEL_RXD
HOTEL_TXD
SCL_D
SDA_D
KEY_INPUT1
KEY_INPUT2
EEPROM_WP
IDENT_AV1
MS_MICOM_TX
MS_MICOM_RX
LED_STB
IDENT_COMP1
R1899_HT
10Kohm
R1921_HT
0ohm
R1924_HT
0ohm
C1841_HT
100pF

UART_SEL1	UART_SEL2	SELECT
H	H	OFF
H	H	ATV
H	L	IDTV
L	H	PDP LVDS ON
L	L	PDP LVDS OFF

COM


A5V_1
DDC_VCC
PC_5V
HDMI1_5V
HDMI2_5V
HDMI3_5V
D1801 KDS184
D1802 KDS184
D1803_NSIDE KDS184
R1943_DE 10Kohm
R1801 10Kohm
DDC_WP
MCAD(0:7)
R1803 4.7Kohm
Q1801 KSC1623-Y
DGND
R1805 0ohm
BUSY
B3.3VD
L1802 10uH
C1816 1nF
C1818 1nF
C1822 10000nF 10V
C1820 100nF
R1822 1M
R1804_DE
R1925
R1997
A3.3V
R1820 3.3Kohm
R1821 3.3Kohm
R1824 4.7Kohm
R1825 4.7Kohm
N_MICOM
IC1802 M308A0SGP
R1828 0ohm
R1830 0ohm
R1831 0ohm
R1834 0ohm
SDA0
SCL0
SDA1
SCL1
MCA(0:21)
RA1807 10ohm
RA1808 10ohm
R1842 10ohm
RA1809 10ohm
RA1811 10ohm
R1847 10ohm
R1848_1M2M
R1849_1M2M
R1953_2M
R1850_4M
R1852_4M
R1853_4M
R1854_4M
R1857 10ohm
R1859 10ohm
R1860 10ohm
R1863 10ohm
R1864 47ohm
CSN
CS1
CE
OE
ALE
FBE_RESET
R1885 4.7Kohm
R1886 4.7Kohm
R1887 4.7Kohm
R1888 4.7Kohm
B5V_VCCA
R1880 10Kohm
R1881 10Kohm
Q1806 2N7002L
Q1808 2N7002L
SCL2
SDA2
TEST1801_TEST
SDA_D
SCL_D
MICOM_RESET
SW_POWER
SUBMICOM DOWNLOAD JACK
RAM
C1857_WX 100nF
C1858_WX 10000nF
BD1803_WX MPZ2012S300A
IC1812_WX LP62S1024BV-55LLT
R1962_WX 0ohm
R1964_WX 0ohm
OE
CS1
R1963_WX 0ohm
R1965_WX 0ohm
DOWNLOAD_CE
CE
MCAD(0:7)
A5V_1
B5V_VCCA
BD1804_HT MPZ2012S300A
BD1805_NHT MPZ2012S300A
D1804 RD8.2MB
C1829 100nF
C1828 10000nF
C1827 100nF
C1830 100nF
IC1804 MAX232ECWE
C1831 100nF
R1874 100ohm
R1875 100ohm
SERVICE_ANY_TX
SERVICE_ANY_RX
HOTEL_STB_TX
HOTEL_STB_RX
R1877 100ohm
R1878 100ohm
C1832_DE 1nF
C1833_DE 1nF
C1836 100nF
B3.3VD
IC1805 MM74HC4052M
R1895
R1998
R1999
C1839 10000nF
C1838 100nF
R1882 10Kohm
R1883 10Kohm
R1892 4.7Kohm
R1893 4.7Kohm
R1895 0ohm
R1927 0ohm
LOGIC_TX_P
LOGIC_RX_P
DTV_SERVICE_RXD
DTV_SERVICE_TXD
Q1823 KSC1623-Y
R1889 10Kohm
UART_SEL1
R1996 10Kohm
UART_SEL2
Q1821 KSC1623-Y
HOTEL OPTION
A5V_1
A3.3V
R1919_HT 4.7Kohm
R1899_HT 10Kohm
R1900_HT 10Kohm
R1920_HT 4.7Kohm
R1921_HT 0ohm
Q1810_HT 2N7002L
HOTEL_TXD
R1924_HT 0ohm
Q1812_HT 2N7002L
HOTEL_RXD
C1841_HT 100pF
C1842_HT 100pF
DGND

UART_SEL1	UART_SEL2	SELECT
H	H	OFF
H	H	ATV
H	L	IDTV
L	H	PDP LVDS ON
L	L	PDP LVDS OFF

7-2-6 SVP-UX (Scaler)

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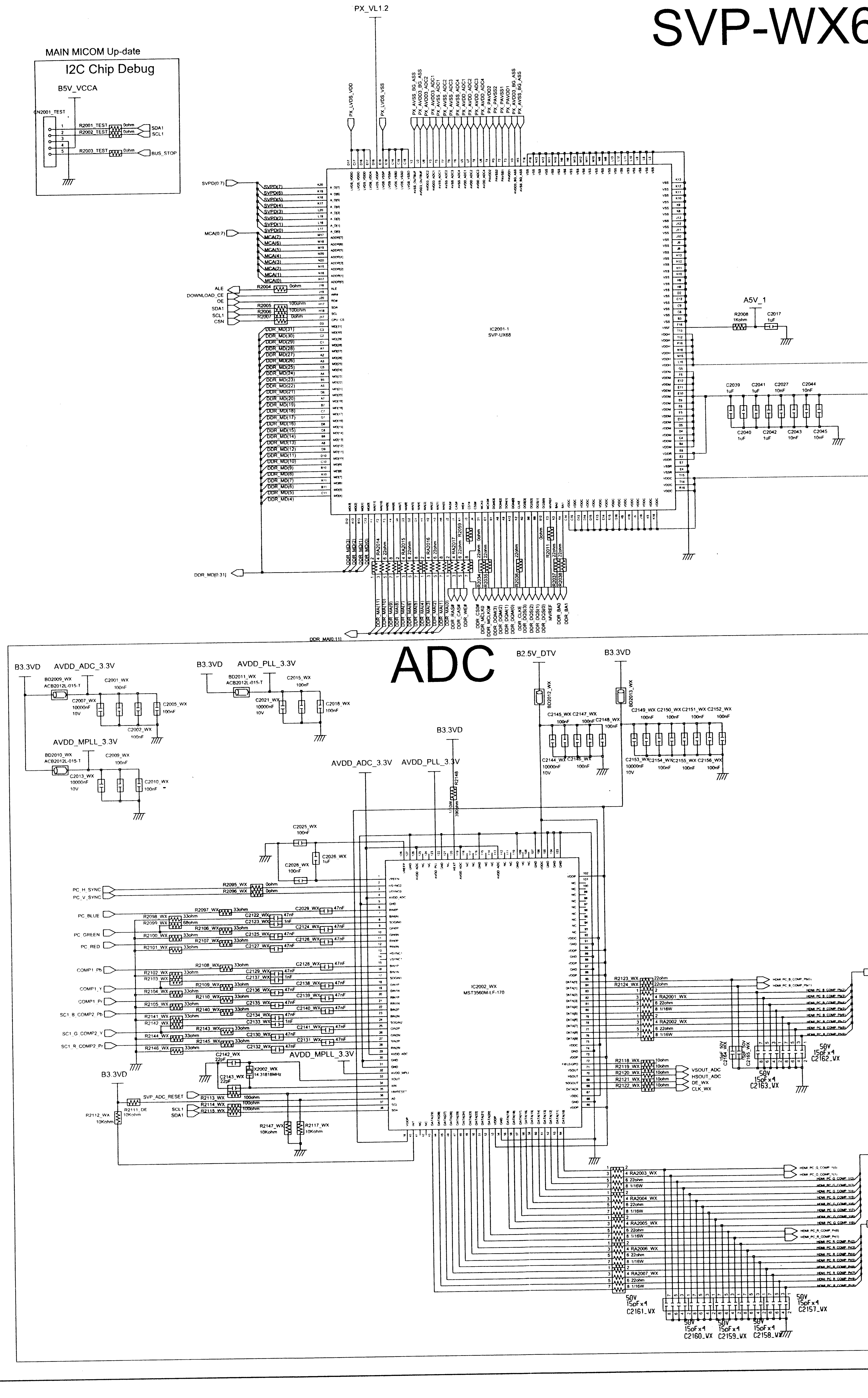
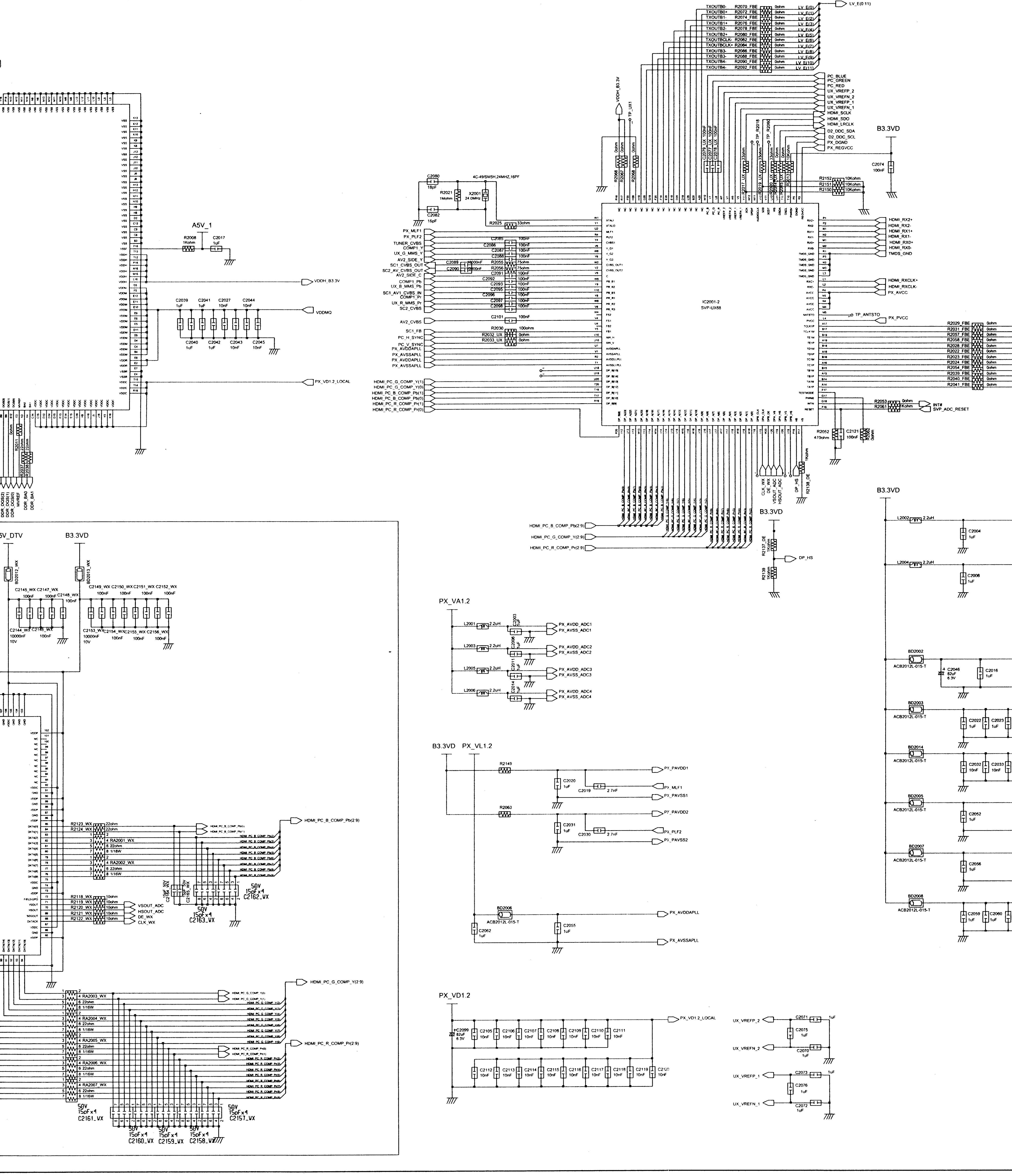
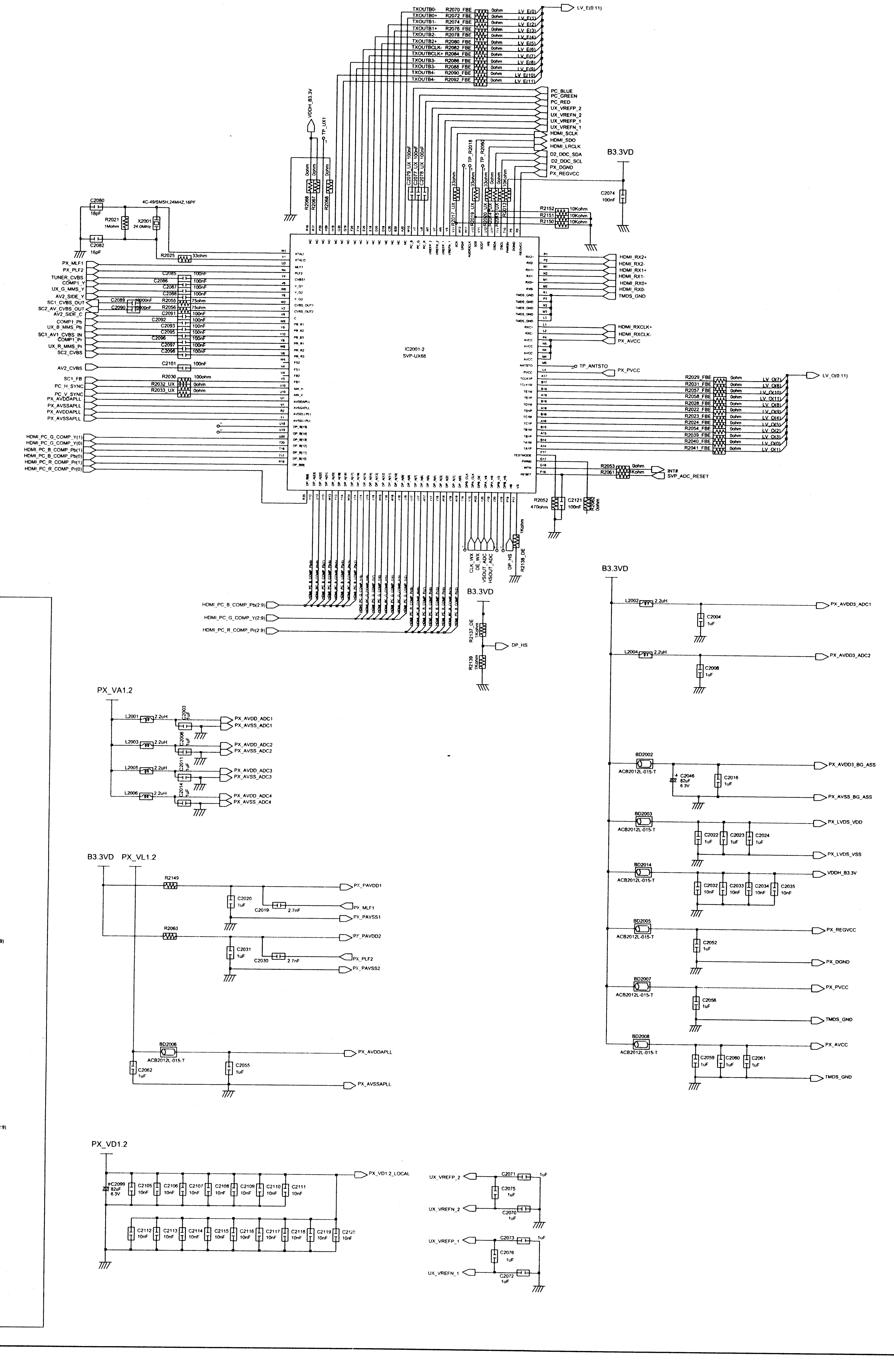
———	Power


SVP-WX6
PX_VL1.2
MAIN MICOM Up-date
I2C Chip Debug
B5V_VCCA
CN2001_TEST
R2001_TEST
R2002_TEST
R2003_TEST
SDA1
SCL1
BUS_STOP
PX_LVDS_VDD
PX_LVDS_VSS
SVPD(0:7)
MCA(0:7)
ALE
DOWNLOAD_CE
OE
SDA1
SCL1
CSN
IC2001-1
SVP-UX68
A5V_1
R2008
1Kohm
C2017
1uF
DDR_MD[0:31]
DDR_MA[0:11]
ADC
B3.3VD
AVDD_ADC_3.3V
AVDD_PLL_3.3V
AVDD_MPLL_3.3V
B2.5V_DTV
PC_H_SYNC
PC_V_SYNC
PC_BLUE
PC_GREEN
PC_RED
COMP1_Pb
COMP1_Y
COMP1_Pr
SC1_B_COMP2_Pb
SC1_G_COMP2_Y
SC1_R_COMP2_Pr
IC2002_WX
MST3560M-LF-170
X2002_WX
14.31818MHz
SVP_ADC_RESET
SCL1
SDA1
VSOUT_ADC
HSOUT_ADC
DE_WX
CLK_WX
50V
15pFx4
C2162_WX
C2163_WX
C2161_WX
C2160_WX
C2159_WX
C2158_WX
C2157_WX

SVP-WX68


IC2001-2
SVP-UX68
A5V_1
VDDH_B3.3V
VDDMQ
PX_VD1.2_LOCAL
B3.3VD
LV_E(0:11)
X2001
24.0MHz
HDMI_RX2+
HDMI_RX2-
HDMI_RX1+
HDMI_RX1-
HDMI_RX0+
HDMI_RX0-
TMDS_GND
HDMI_RXCLK+
HDMI_RXCLK-
PX_AVCC
TP_ANTSTO
PX_PVCC
INT#
SVP_ADC_RESET
HDMI_PC_B_COMP_Pb(2:9)
HDMI_PC_G_COMP_Y(2:9)
HDMI_PC_R_COMP_Pr(2:9)
DP_HS
PX_VA1.2
PX_AVDD_ADC1
PX_AVSS_ADC1
PX_AVDD_ADC2
PX_AVSS_ADC2
PX_AVDD_ADC3
PX_AVSS_ADC3
PX_AVDD_ADC4
PX_AVSS_ADC4
PX_VL1.2
PX_PAVDD1
PX_MLF1
PX_PAVSS1
PY_PAVDD2
PX_PLF2
P3_PAVSS2
PX_AVDDAPLL
PX_AVSSAPLL
PX_VD1.2
UX_VREFP_2
UX_VREFN_2
UX_VREFP_1
UX_VREFN_1
A5V_DTV
VSOUT_ADC
HSOUT_ADC
DE_WX
CLK_WX
ACB2012L-015-T


IC2001-2
SVP-UX68
LV_E(0:11)
LV_O(0:11)
TXOUTB0-
TXOUTB0+
TXOUTB1-
TXOUTB1+
TXOUTB2-
TXOUTB2+
TXOUTBCLK-
TXOUTBCLK+
TXOUTB3-
TXOUTB3-
TXOUTB4-
TXOUTB4-
PC_BLUE
PC_GREEN
PC_RED
UX_VREFP_2
UX_VREFN_2
UX_VREFP_1
UX_VREFN_1
HDMI_SCLK
HDMI_SDO
HDMI_LRCLK
D2_DDC_SDA
D2_DDC_SCL
PX_DGND
PX_REGVCC
B3.3VD
VDDH_B3.3V
TP_UX1
C2074
100nF
R2152
R2151
R2150
10Kohm
C2080
18pF
C2082
15pF
R2021
1Mohm
X2001
24.0MHz
4C-49/SMSH,24MHZ,16PF
R2025
33ohm
PX_MLF1
PX_PLF2
TUNER_CVBS
COMP1_Y
UX_G_MMS_Y
AV2_SIDE_Y
SC1_CVBS_OUT
SC2_AV_CVBS_OUT
AV2_SIDE_C
COMP1_Pb
UX_B_MMS_Pb
SC1_AV1_CVBS_IN
COMP1_Pr
UX_R_MMS_Pr
SC2_CVBS
AV2_CVBS
SC1_FB
PC_H_SYNC
PC_V_SYNC
PX_AVDDAPLL
PX_AVSSAPLL
PX_AVDDAPLL
PX_AVSSAPLL
HDMI_PC_G_COMP_Y(1)
HDMI_PC_G_COMP_Y(0)
HDMI_PC_B_COMP_Pb(1)
HDMI_PC_B_COMP_Pb(0)
HDMI_PC_R_COMP_Pr(1)
HDMI_PC_R_COMP_Pr(0)
HDMI_RX2+
HDMI_RX2-
HDMI_RX1+
HDMI_RX1-
HDMI_RX0+
HDMI_RX0-
TMDS_GND
HDMI_RXCLK+
HDMI_RXCLK-
PX_AVCC
TP_ANTSTO
PX_PVCC
R2053
R2061
INT#
SVP_ADC_RESET
R2052
470ohm
C2121
100nF
HDMI_PC_B_COMP_Pb(2:9)
HDMI_PC_G_COMP_Y(2:9)
HDMI_PC_R_COMP_Pr(2:9)
CLK_WX
DE_WX
VSOUT_ADC
HSOUT_ADC
DP_HS
R2138_DE
R2137_DE
R2139
1Kohm
PX_VA1.2
L2001
L2003
L2005
L2006
2.2uH
PX_AVDD_ADC1
PX_AVSS_ADC1
PX_AVDD_ADC2
PX_AVSS_ADC2
PX_AVDD_ADC3
PX_AVSS_ADC3
PX_AVDD_ADC4
PX_AVSS_ADC4
B3.3VD
PX_VL1.2
R2149
R2063
C2020
C2019
2.7nF
PX_PAVDD1
PX_MLF1
PX_PAVSS1
C2031
C2030
PX_PAVDD2
PX_PLF2
PX_PAVSS2
BD2006
ACB2012L-015-T
C2062
C2055
PX_AVDDAPLL
PX_AVSSAPLL
PX_VD1.2
PX_VD1.2_LOCAL
C2099
82uF
6.3V
C2105
C2106
C2107
C2108
C2109
C2110
C2111
C2112
C2113
C2114
C2115
C2116
C2117
C2118
C2119
C2120
10nF
UX_VREFP_2
UX_VREFN_2
UX_VREFP_1
UX_VREFN_1
C2071
C2075
C2070
C2073
C2076
C2072
1uF
L2002
L2004
C2004
C2008
PX_AVDD3_ADC1
PX_AVDD3_ADC2
BD2002
C2046
82uF
6.3V
C2016
PX_AVDD3_BG_ASS
PX_AVSS_BG_ASS
BD2003
C2022
C2023
C2024
PX_LVDS_VDD
PX_LVDS_VSS
BD2014
C2032
C2033
C2034
C2035
VDDH_B3.3V
BD2005
C2052
PX_REGVCC
PX_DGND
BD2007
C2056
PX_PVCC
TMDS_GND
BD2008
C2059
C2060
C2061
PX_AVCC
TMDS_GND

7-2-7 DDR & Tuner

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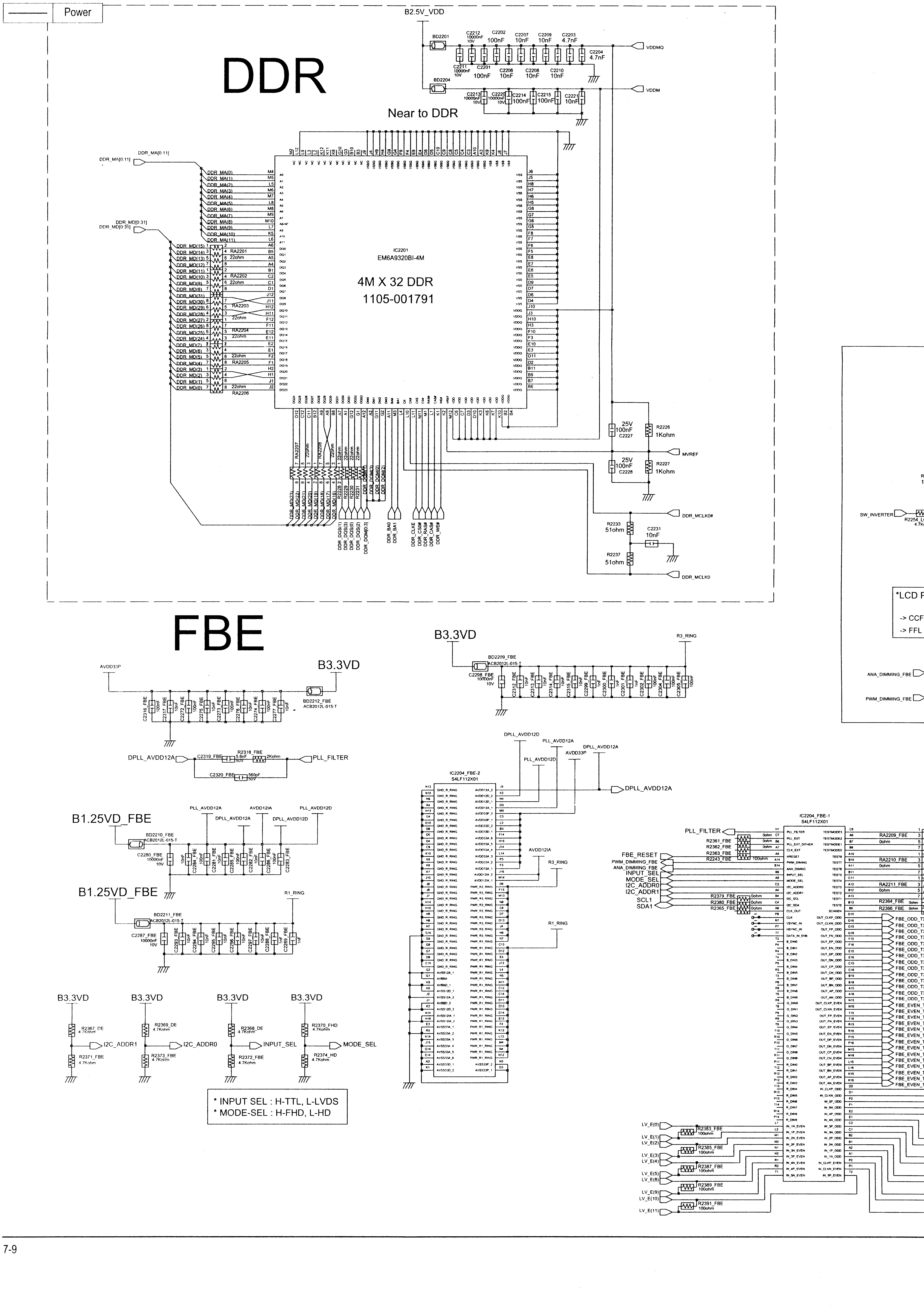
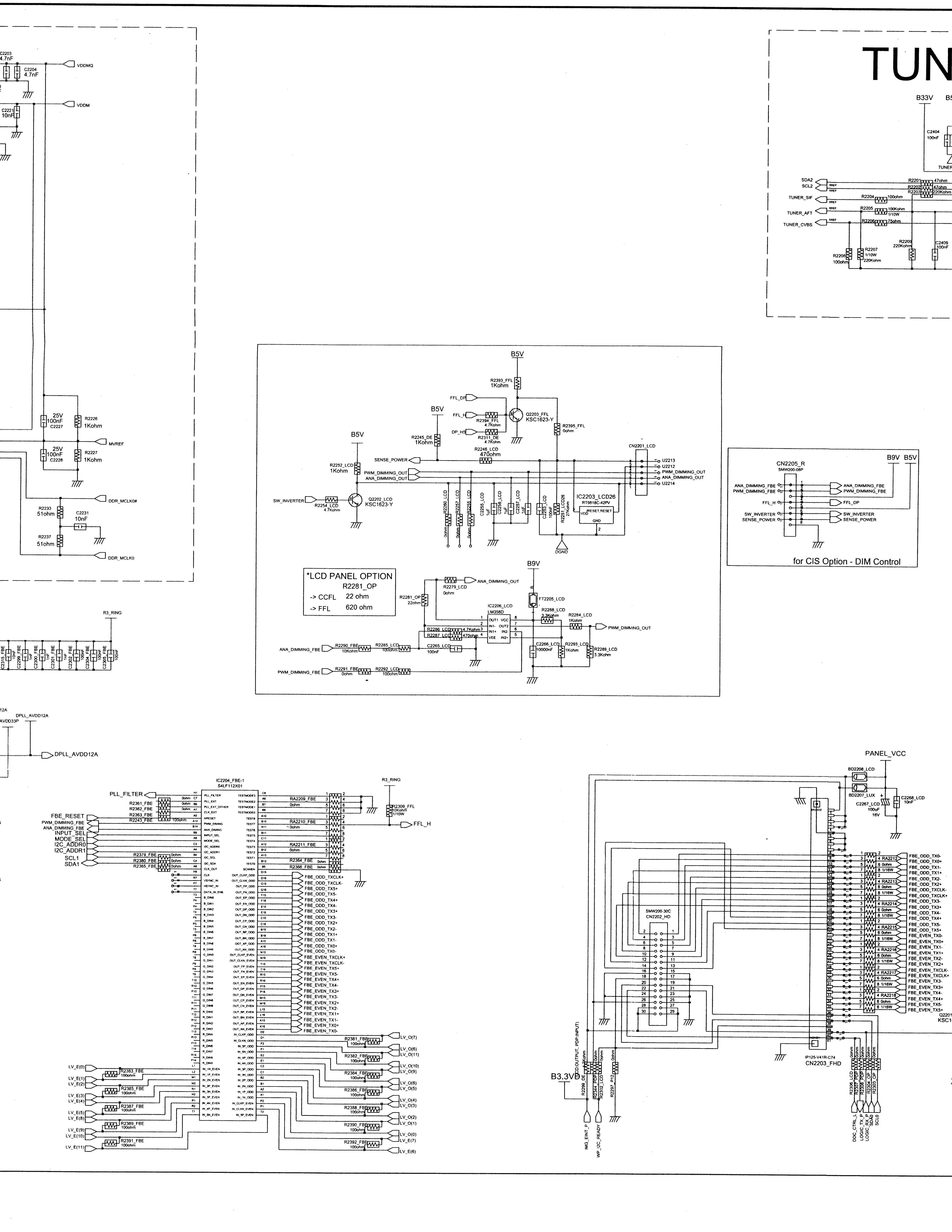
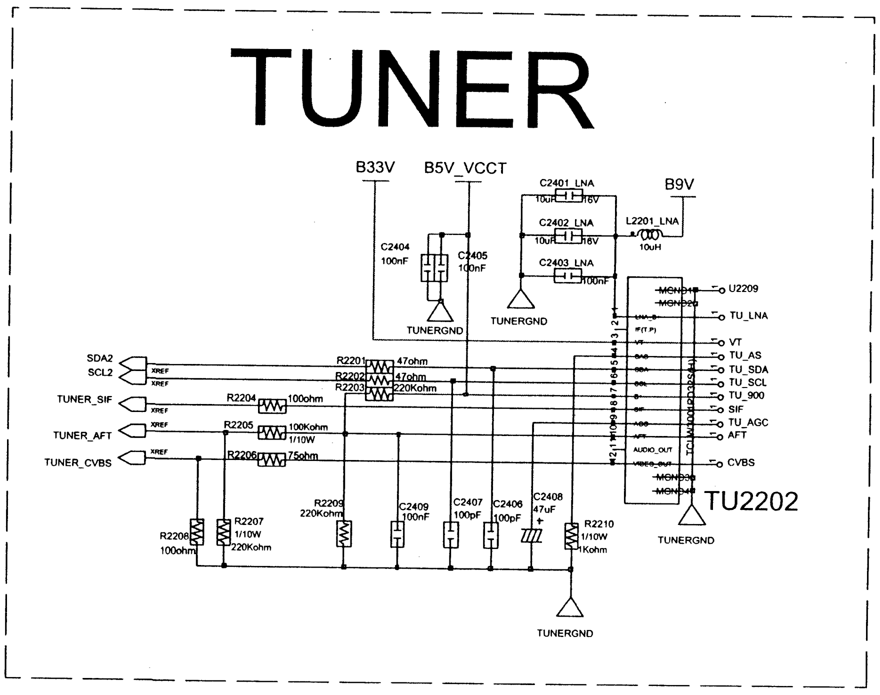
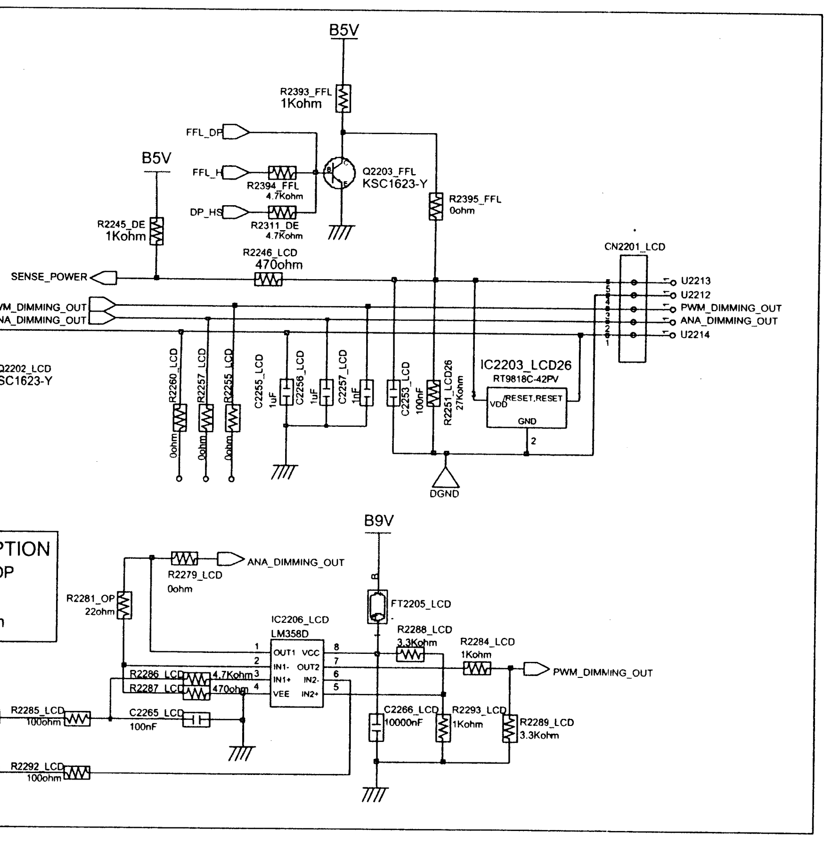
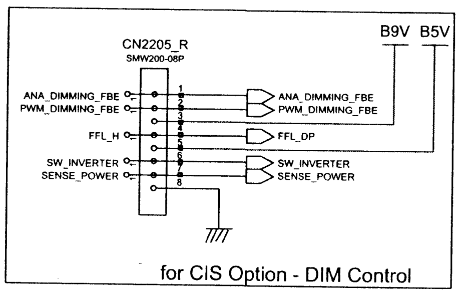

Power
DDR
B2.5V_VDD
BD2201
BD2204
VDDMQ
VDDM
Near to DDR
DDR_MA[0:11]
DDR_MD[0:31]
IC2201
EM6A9320BI-4M
4M X 32 DDR
1105-001791
RA2201
RA2202
RA2203
RA2204
RA2205
RA2206
RA2207
RA2208
22ohm
25V
100nF
C2227
C2228
R2226
1Kohm
R2227
1Kohm
MVREF
DDR_MCLK0#
DDR_MCLK0
R2233
51ohm
R2237
51ohm
C2231
10nF
DDR_DQS(1)
DDR_DQS(3)
DDR_DQS(0)
DDR_DQS(2)
DDR_DQM[0:3]
DDR_BA0
DDR_BA1
DDR_CLKE
DDR_CS0#
DDR_RAS#
DDR_CAS#
DDR_WE#
FBE
AVDD33P
B3.3VD
BD2212_FBE
ACB2012L-015-T
BD2209_FBE
C2298_FBE
R3_RING
DPLL_AVDD12A
C2319_FBE
R2318_FBE
2Kohm
C2320_FBE
560pF
PLL_FILTER
B1.25VD_FBE
BD2210_FBE
C2280_FBE
BD2211_FBE
C2287_FBE
R1_RING
PLL_AVDD12A
AVDD12IA
PLL_AVDD12D
DPLL_AVDD12D
DPLL_AVDD12A
IC2204_FBE-2
S4LF112X01
AVDD33P
R2367_DE
4.7Kohm
R2371_FBE
I2C_ADDR1
R2369_DE
R2373_FBE
I2C_ADDR0
R2368_DE
R2372_FBE
INPUT_SEL
R2370_FHD
R2374_HD
MODE_SEL
IC2204_FBE-1
S4LF112X01
R2361_FBE
R2362_FBE
R2363_FBE
R2243_FBE
FBE_RESET
PWM_DIMMING_FBE
ANA_DIMMING_FBE
INPUT_SEL
MODE_SEL
I2C_ADDR0
I2C_ADDR1
SCL1
SDA1
R2379_FBE
R2380_FBE
R2365_FBE
RA2209_FBE
RA2210_FBE
RA2211_FBE
R2364_FBE
R2366_FBE
LV_E(0)
LV_E(1)
LV_E(2)
LV_E(3)
LV_E(4)
LV_E(5)
LV_E(6)
LV_E(8)
LV_E(9)
LV_E(10)
LV_E(11)
R2383_FBE
R2385_FBE
R2387_FBE
R2389_FBE
R2391_FBE
100ohm
SW_INVERTER
R2254
*LCD P
-> CCF
-> FFL
ANA_DIMMING_FBE
PWM_DIMMING_FBE

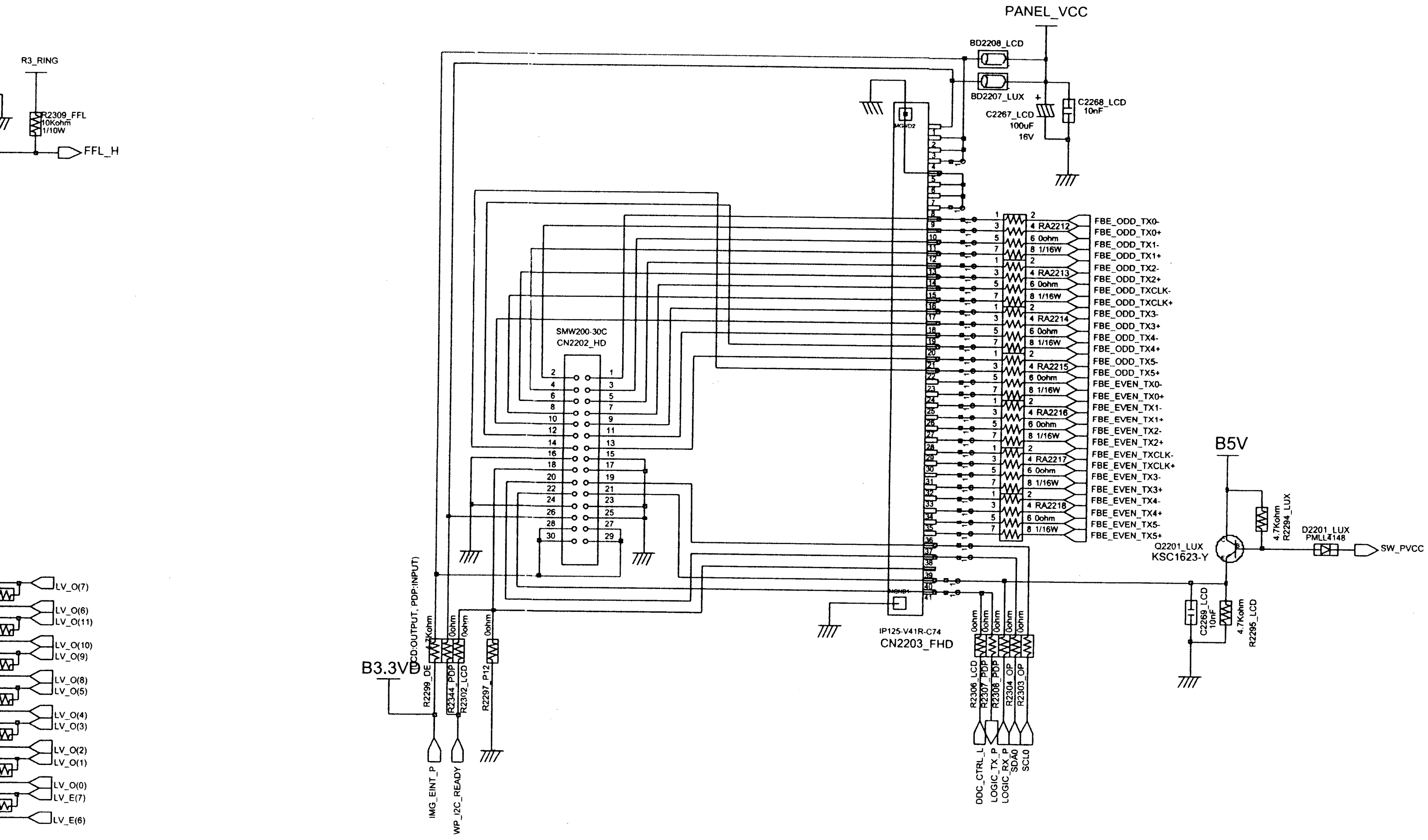
* INPUT SEL : H-TTL, L-LVDS
* MODE-SEL : H-FHD, L-HD


TUN
B33V
B5V
SDA2
SCL2
TUNER_SIF
TUNER_AFT
TUNER_CVBS
VDDMQ
VDDM
MVREF
DDR_MCLK0#
DDR_MCLK0
R3_RING
DPLL_AVDD12A
B5V
B9V
FFL_DP
FFL_H
DP_HS
R2393_FFL 1Kohm
Q2203_FFL KSC1623-Y
R2395_FFL 0ohm
R2245_DE 1Kohm
R2246_LCD 470ohm
SENSE_POWER
R2252_LCD 1Kohm
PWM_DIMMING_OUT
ANA_DIMMING_OUT
SW_INVERTER
R2254_LCD 4.7Kohm
Q2202_LCD KSC1623-Y
CN2201_LCD
U2213
U2212
U2214
IC2203_LCD26
RT9818C-42PV
DGND
IC2206_LCD
LM358D
ANA_DIMMING_FBE
PWM_DIMMING_FBE
FT2205_LCD
*LCD PANEL OPTION
R2281_OP
-> CCFL 22 ohm
-> FFL 620 ohm
CN2205_R
SMW200-08P
SW_INVERTER
SENSE_POWER
FFL_DP
for CIS Option - DIM Control
IC2204_FBE-1
S4LF112X01
PLL_FILTER
FBE_RESET
INPUT_SEL
MODE_SEL
I2C_ADDR0
I2C_ADDR1
SCL1
SDA1
FFL_H
LV_E(0)
LV_E(1)
LV_E(2)
LV_E(3)
LV_E(4)
LV_E(5)
LV_E(8)
LV_E(9)
LV_E(10)
LV_E(11)
LV_O(7)
LV_O(6)
LV_O(11)
LV_O(10)
LV_O(9)
LV_O(8)
LV_O(5)
LV_O(4)
LV_O(3)
LV_O(2)
LV_O(1)
LV_O(0)
LV_E(7)
LV_E(6)
PANEL_VCC
BD2208_LCD
BD2207_LUX
C2268_LCD 10nF
C2267_LCD 100uF 16V
SMW200-30C
CN2202_HD
IP125-V41R-C74
CN2203_FHD
B3.3V
IMG_EINT_P
WP_I2C_READY
FBE_ODD_TX0-
FBE_ODD_TX0+
FBE_ODD_TX1-
FBE_ODD_TX1+
FBE_ODD_TX2-
FBE_ODD_TX2+
FBE_ODD_TXCLK-
FBE_ODD_TXCLK+
FBE_ODD_TX3-
FBE_ODD_TX3+
FBE_ODD_TX4-
FBE_ODD_TX4+
FBE_ODD_TX5-
FBE_ODD_TX5+
FBE_EVEN_TX0-
FBE_EVEN_TX0+
FBE_EVEN_TX1-
FBE_EVEN_TX1+
FBE_EVEN_TX2-
FBE_EVEN_TX2+
FBE_EVEN_TXCLK-
FBE_EVEN_TXCLK+
FBE_EVEN_TX3-
FBE_EVEN_TX3+
FBE_EVEN_TX4-
FBE_EVEN_TX4+
FBE_EVEN_TX5-
FBE_EVEN_TX5+
DDC_CTRL_L
LOGIC_TX_P
LOGIC_RX_P
SDA0
SCL0


TUNER
B33V
B5V_VCCT
B9V
C2401_LNA
C2402_LNA
C2403_LNA
L2201_LNA
C2404 100nF
C2405 100nF
TUNERGND
U2209
TU_LNA
VT
TU_AS
TU_SDA
TU_SCL
TU_900
SIF
TU_AGC
AFT
CVBS
SDA2
SCL2
TUNER_SIF
TUNER_AFT
TUNER_CVBS
R2201 47ohm
R2202 47ohm
R2203 220Kohm
R2204 100ohm
R2205 100Kohm 1/10W
R2206 75ohm
R2207 1/10W 220Kohm
R2208 100ohm
R2209 220Kohm
C2409 100nF
C2407 100pF
C2406 100pF
C2408 47uF
R2210 1/10W 1Kohm
TU2202


B5V
R2393_FFL 1Kohm
FFL_DP
FFL_H
DP_HS
R2394_FFL 4.7Kohm
R2311_DE 4.7Kohm
Q2203_FFL KSC1623-Y
R2395_FFL 0ohm
R2245_DE 1Kohm
R2246_LCD 470ohm
SENSE_POWER
PWM_DIMMING_OUT
ANA_DIMMING_OUT
CN2201_LCD
U2213
U2212
PWM_DIMMING_OUT
ANA_DIMMING_OUT
U2214
Q2202_LCD KSC1623-Y
R2260_LCD
R2257_LCD
C2255_LCD
C2256_LCD
C2257_LCD
C2258_LCD
R2251_LCD26
IC2203_LCD26
RT9818C-42PV
DGND
PTION
B9V
R2279_LCD 0ohm
ANA_DIMMING_OUT
R2281_OP 22ohm
FT2205_LCD
IC2206_LCD LM358D
R2288_LCD 3.3Kohm
R2284_LCD 1Kohm
PWM_DIMMING_OUT
R2286_LCD
R2287_LCD 4.7Kohm 470ohm
R2285_LCD 100ohm
C2265_LCD 100nF
C2266_LCD 10000nF
R2293_LCD 1Kohm
R2289_LCD 3.3Kohm
R2292_LCD 100ohm


CN2205_R
SMW200-08P
B9V
B5V
ANA_DIMMING_FBE
PWM_DIMMING_FBE
FFL_H
FFL_DP
SW_INVERTER
SENSE_POWER
for CIS Option - DIM Control


PANEL_VCC
BD2208_LCD
BD2207_LUX
C2267_LCD 100uF 16V
C2268_LCD 10nF
R3_RING
R2309_FFL 10Kohm 1/10W
FFL_H
SMW200-30C
CN2202_HD
RA2212
RA2213
RA2214
RA2215
RA2216
RA2217
RA2218
FBE_ODD_TX0-
FBE_ODD_TX0+
FBE_ODD_TX1-
FBE_ODD_TX1+
FBE_ODD_TX2-
FBE_ODD_TX2+
FBE_ODD_TXCLK-
FBE_ODD_TXCLK+
FBE_ODD_TX3-
FBE_ODD_TX3+
FBE_ODD_TX4-
FBE_ODD_TX4+
FBE_ODD_TX5-
FBE_ODD_TX5+
FBE_EVEN_TX0-
FBE_EVEN_TX0+
FBE_EVEN_TX1-
FBE_EVEN_TX1+
FBE_EVEN_TX2-
FBE_EVEN_TX2+
FBE_EVEN_TXCLK-
FBE_EVEN_TXCLK+
FBE_EVEN_TX3-
FBE_EVEN_TX3+
FBE_EVEN_TX4-
FBE_EVEN_TX4+
FBE_EVEN_TX5-
FBE_EVEN_TX5+
B5V
R2294_LUX 4.7Kohm
Q2201_LUX KSC1623-Y
D2201_LUX PMLL4148
SW_PVCC
C2269_LCD 10nF
R2295_LCD 4.7Kohm
IP125-V41R-C74
CN2203_FHD
LV_O(7)
LV_O(6)
LV_O(11)
LV_O(10)
LV_O(9)
LV_O(8)
LV_O(5)
LV_O(4)
LV_O(3)
LV_O(2)
LV_O(1)
LV_O(0)
LV_E(7)
LV_E(6)
B3.3V
LCD:OUTPUT, PDP:INPUT
R2296_DE
R2344_PDP
R2312_LCD
R2297_P12
IMG_EINT_P
WP_I2C_READY
R2306_LCD
R2307_PDP
R2308_PDP
R2304_OP
R2305_OP
DDC_CTRL_L
LOGIC_TX_P
LOGIC_RX
SDA0
SCL0